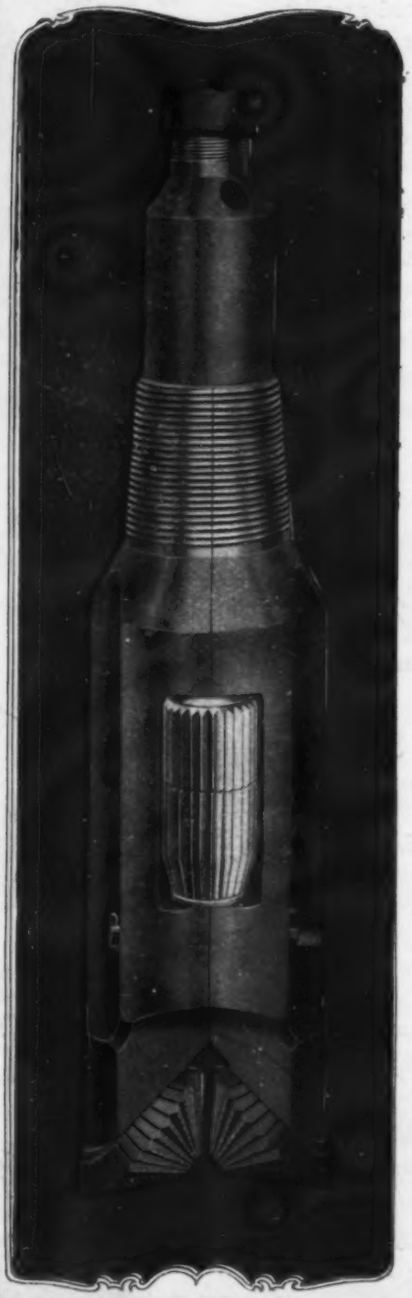
The OIL WEEKLY

A Journal for Oil and Gas Producers and Field Men

April 24, 1925 — 10 Cents A Copy



What Does a Rock Bit Cost?

The answer depends entirely on what it will do

HUGHES SIMPLEX ROCK BITS

—have proven their economy to the rotary users throughout the world. No other tool will make hole through hard rock with the speed and safety of a Hughes Rock Bit.

—Hughes Bit Heads last indefinitely because there is no part of the head that touches the bottom of the hole.

—Hughes Cones are made from selected, wear-resisting, alloy steel and assure maximum footage before changing is necessary.

Sold By Supply Stores Everywhere

HUGHES TOOL COMPANY

Branch Office and Plant Los Angeles — Main Office and Plant HOUSTON, TEXAS — Export Office New York City

Forget the Paint Problem when you buy "IDECO'S"

PAINTING is an expense—an expense which occurs again and again throughout the life of any un-galvanized derrick. Paint doesn't just walk to the location. A good paint job means good material, and labor plus the overhead expense—a poorly applied coating is as good as none.

In most localities, a derrick, unless galvanized, must have a coat of paint every year or two. Even then you have little assurance that every part is protected at all times. It is practically impossible to reach every crack, crevice and joint with paint. These unprotected points are rusting away, even with a paint job every year. It's not only expensive, it's dangerous—your structure will be weakened at these unprotected places and in a very short time will lose its original strength.

Oil companies, which have investigated costs, will tell you that the first repainting job will practically pay for the additional cost of International "Ideco" Derricks of Galvanized Structural steel.

The International "Ideco" Galvanized Derrick is "heat treated." The hot galvanizing process fairly drives the zinc coating into the steel. Applied after all shop work is completed, this galvanizing reaches every joint, inside and outside, protecting it permanently. That's why International "Ideco" Galvanized Steel Derricks live on and on—without expense or repair.

International "Ideco" Derricks of Galvanized Structural Steel need no paint

International Wheels, Walking Beams, Crown Blocks, Machinery Supports and Complete Rigs are also furnished Galvanized.

The International Derrick & Equipment Co.

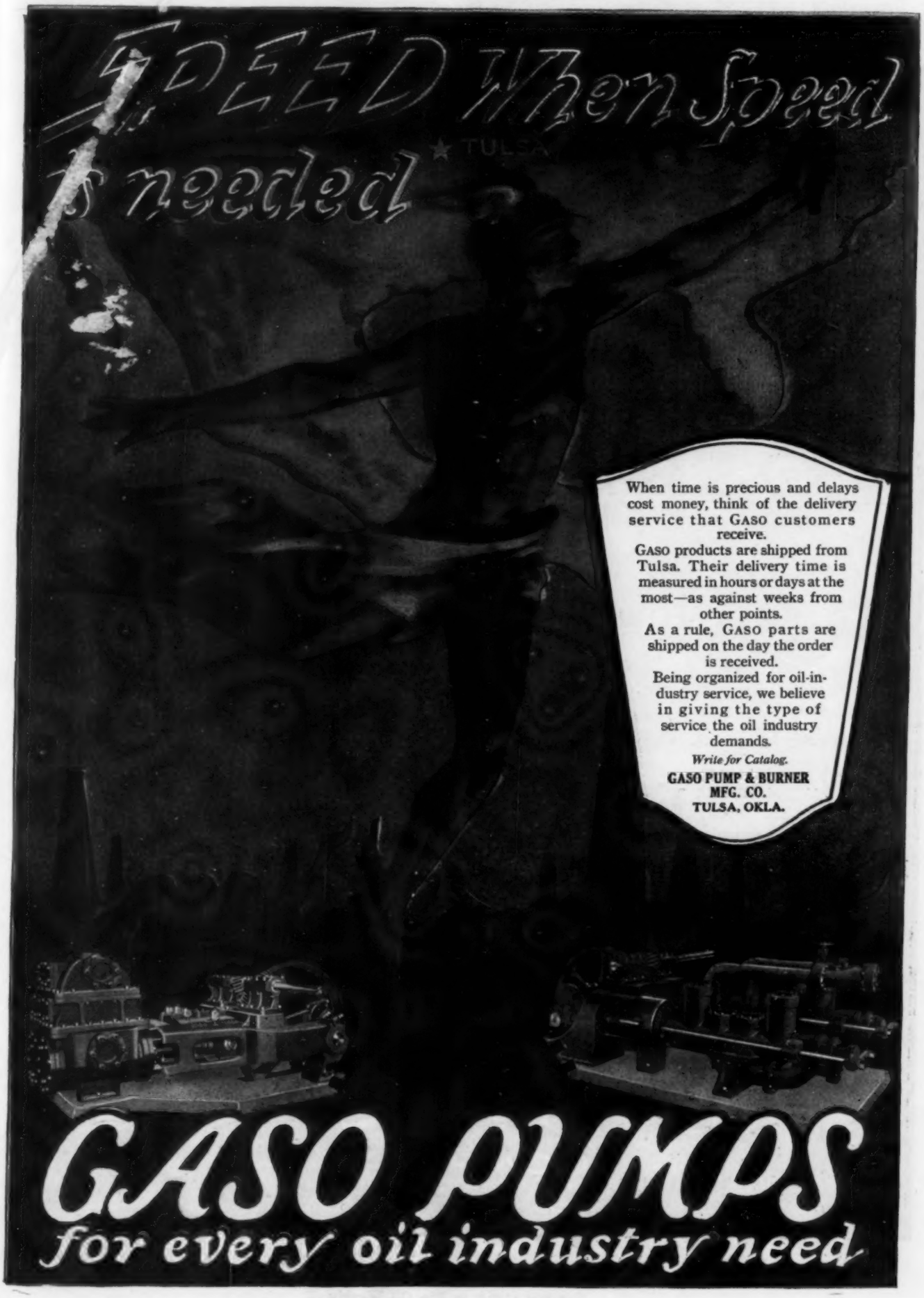
Columbus, Ohio—Los Angeles, Cal.

Tulsa Shreveport Houston Casper Bakersfield Taft Oil City Smackover
Wichita Falls Eldorado, Kan. Corsicana Mexia New York

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

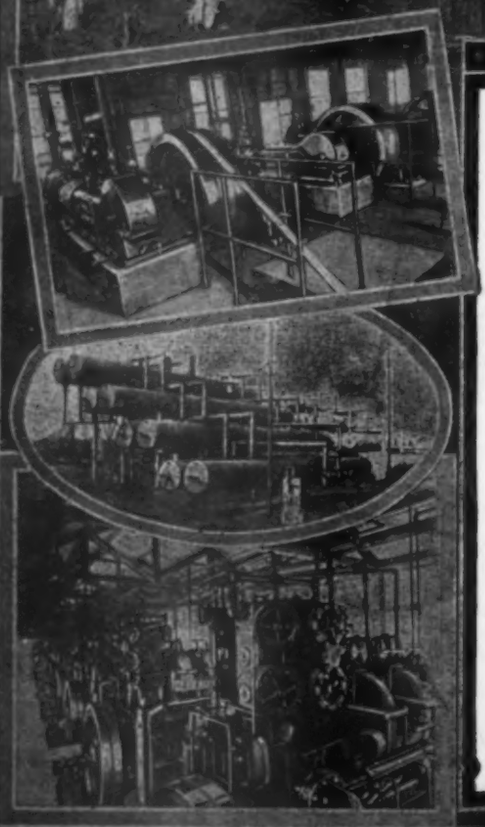
INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

THE OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.


SPEED When Speed is needed
★ TULSA
When time is precious and delays cost money, think of the delivery service that GASO customers receive.
GASO products are shipped from Tulsa. Their delivery time is measured in hours or days at the most—as against weeks from other points.
As a rule, GASO parts are shipped on the day the order is received.
Being organized for oil-industry service, we believe in giving the type of service the oil industry demands.
Write for Catalog.
GASO PUMP & BURNER MFG. CO.
TULSA, OKLA.
GASO PUMPS
for every oil industry need

Say you saw it in The Oil Weekly

The MOST GASOLINE at the LEAST COST



HOPE

THIS is the 52nd Hope-built gasoline plant, and the latest and largest achievement of Hope Service, with exceptional results due to Hope Experience and Hope Appliances.

It is 18 miles from a railroad and 4 miles from a highway. Clearing the site began August 20, 1924—production began November 19, 1924—91 days for the completed job.

Average daily production in December, 22,000 gallons; in January, 24,000 gallons. Gasoline marketed in December was 108% of amount shown by most rigid charcoal tests.

To get the most gasoline per dollar of plant investment, in the shortest time—put it up to Hope.

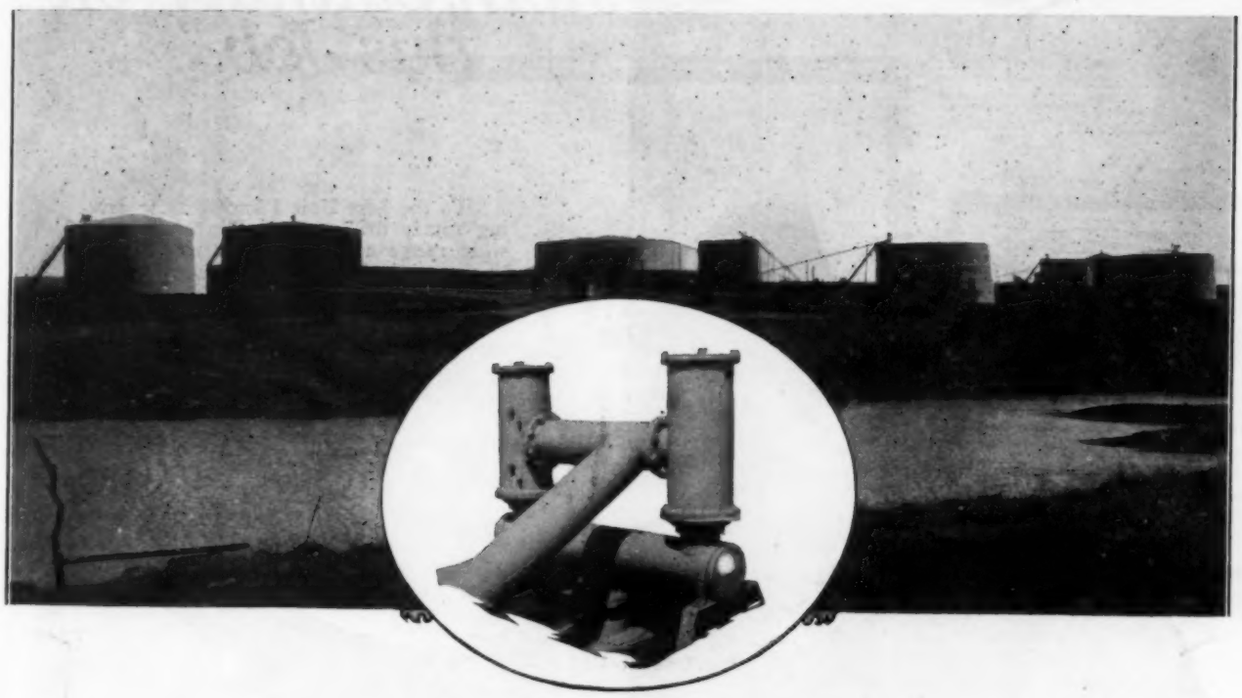
ENGINEERS CONTRACTORS

HOPE Engineering & Supply COMPANY

MT. VERNON, OHIO, U. S. A.

DESIGNERS MANUFACTURERS

LIQUID SAFETY VALVE



Shaffer Has Eliminated Evaporation

From Its Tanks and From Its Payroll

Give a thought To Conservation

The initial step toward more profit has been taken at the Shaffer Refinery, Cushing, Oklahoma. LIQUID SAFETY VALVES have been installed (under standard insurance specifications) on their large storage tanks.

Shaffer, like hundreds of other modern operators, realizes the urgent need for *preventative* and *protective* measures in conserving and safe guarding stored oil. And Shaffer, as well as the other hundreds of operators, has chosen LIQUID SAFETY VALVES. They have chosen wisely and well, as the coming years of service and increased profits will show.

LIQUID SAFETY VALVES *are installed under standard insurance specifications*

WESTCOTT & GREIS

Sales Service

Dallas TULSA Los Angeles

Suppose your Tanks were filled with Gold--

WESTGOTT & GREIS

CONSERVATION AND SAFETY

LUCEY TWIN~

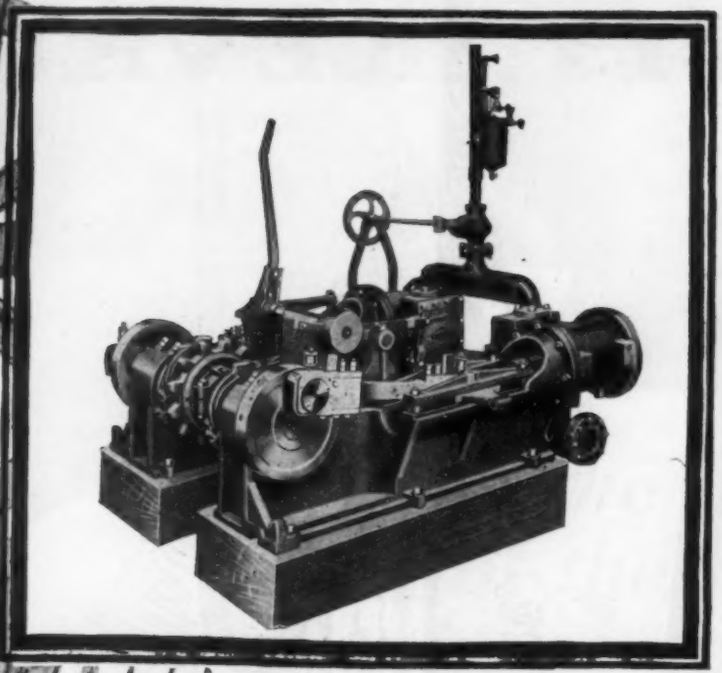
"Better Get a Lucey Twin Cylinder on this Job."

"It's the best Unit I know of for driving rotary drilling equipment. It has a wide range of speed,—extremely sensitive—practically no vibration,—perfect reverse action and it can't possibly stop on dead centers."

Wherever THE NAME IS A LUCEY GUARANTEE there's Oil

Say you saw it in The Oil Weekly

CYLINDER *Drilling Engine*



Lucey Twin Cylinder Engines played a most important part in the drilling record recently established in the Wortham field by one of the Rio Bravo Oil Company drilling crews — when 917 feet of hole was made in 10 hours.

You too will find Lucey Twin Cylinders always on the job,—steady, reliable—ready for any and all kinds of service.

A few of the many reasons for the supremacy of Lucey Twin Cylinder Drilling Engines:—

Simple in that it is made of few parts.

Rigid because the beds, base and valve stem guides are made in one casting,—a feature which also insures accurate alignment.

Accessible on account of its design—all moving parts can be readily reached and adjusted.

All wearing parts—such as connecting rod brasses, valve stem guide, link and crosshead,—interchange with our standard single cylinder engine.

All eccentric hubs and sprockets are made in halves and are easy to remove.

Easy to reverse due to balance and design of reverse link suspension.

Throttle valve manifold can be furnished to take throttle valve in center—as shown by the illustration—or offset to one side.

Regularly furnished in 10-inch by 10-inch size.

Any Lucey Branch will be glad to give complete information about this remarkable driving unit.

Lucey Manufacturing Corporation.

Main Office and Works:

Chattanooga, Tennessee

Export Department: Woolworth Bldg., New York City

IDEAL

SAFETY ELEVATOR

The Positive Acting Latch Assures Absolute Safety at All Times

THE NATIONAL SUPPLY COMPANIES

Say you saw it in The Oil Weekly

When the First Cost is Not the Last Cost

THESE two photographs, taken in the Humble District in Texas, tell a complete story. The four great destroyers of pipe life—salt water, alkali, river crossings and marsh lands—have won another victory over steel pipe.

The resultant replacement of inferior pipe with good pipe and the consequent loss of oil prove that the first cost was not the last cost.

Reading Genuine Wrought Iron Pipe is so far superior to steel in its ability to resist corrosion that its use is practically imperative when long life and economy are essential. It costs a little more than steel originally, but its many years of useful life make it far cheaper in the end.

READING IRON COMPANY
READING, PA.
World's Largest Manufacturers of Genuine Wrought Iron Pipe
OIL WELL SUPPLY COMPANY, Distributors
Inquire at any of their 100 branches

READING PIPE
GENUINE WROUGHT IRON

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Magnolia Petroleum Company

Producer *Refiner* *Jobber* *Distributer*

High Grade Petroleum Products

FUEL OIL

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BEAUMONT CORSICANA SABINE GALVESTON FT. WORTH
HARBOR ISLAND LULING CORPUS CHRISTI DALLAS
HERMA, ARK. MIRANDO

MANUFACTURER OF

Magnolene

Reg. U.

THE

DEPENDABLE LUBRICANT

"A Grade for Each Condition

For satisfactory operation of Ford Cars use Magnolene Ford Oil

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General Offices: DALLAS, TEXAS

DIVISION SALES OFFICES:

DALLAS HOUSTON FT. WORTH SAN ANTONIO OKLAHOMA CITY LITTLE ROCK
AMARILLO EL PASO

Inquiries Respectfully Solicited

The Fetty Long Stroke Pumping Attachment actually does this—

Will pump more fluid at eleven strokes per minute than you can pump at twenty-four strokes in the second hole on the crank

Fewer strokes per minute
More belt travel per minute

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771 Raymond Avenue
Long Beach, California
Tel. 333433

R. N. ATMORE
404 West First Street
Tulsa, Oklahoma
Tel. 3-3282

R. L. SMITH
1308 Fairview Avenue
Houston, Texas
Tel. Hadley 820

FETTY

Pumping Attachment

LONG STROKE

C. C. FETTY & CO., EL DORADO, KANSAS

ZERO HOUR

Electric Bomb Stands Between Your Well and Possible Ruin From Faulty Shots

ANTIQUATED methods of detonating shots in oil wells are unsafe methods. Every form of detonation from the sixty-year-old Bumper Squib to the twenty-year-old Electric Wire Shot is alive with danger to your well. Perhaps you have never had an unfortunate experience with one of these antiquated methods but the unfortunate experiences of others tell you that the danger is real and always present. For instance:

An Official of One of the Largest Midcontinent Producing Companies Makes This Comment—

"Our losses in the LAST YEAR from faulty shots by old methods of detonation (Jack Squibs, Electric Wire Shots and Bumper Squibs) would pay for all the Zero Hour Electric Bombs we could use in the next FIVE YEARS."

Why Take a Chance When You Don't Have To?

Zero Hour Electric Bomb is a safe, sure method of detonation as proven by its record of more than 400 successful detonations in the Wyoming and Mid-Continent fields in the past six months.

Zero Hour Bomb Eliminates The Danger Present in Every Squib Shot

That is, that an accidental or premature explosion may damage the casing; Zero Hour Bomb is elecrically operated and time controlled; it positively can't be discharged until the time set—1 to 11 hours as you pre-determine. Our records show that Zero Hour Bombs explode, on the average, within two minutes of the time intended.

Zero Hour Bomb Eliminates The Danger Present in Every Wire Shot

If circuit is broken cavings that fall on top of unexploded shot must be cleaned out before a second shot is attempted—a hazardous undertaking as often the concussion of tools explode the charge warping the tools so badly as to make recovery impossible. Zero Hour Bomb is placed immediately on shot; cavings cannot prevent discharge.

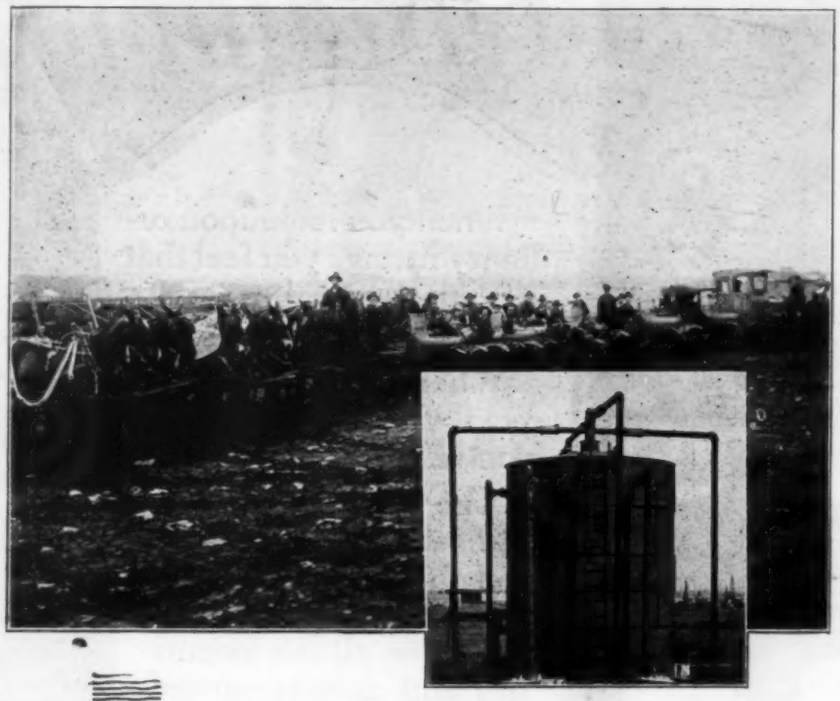
Why Spend From $10,000 to $50,000 in Drilling a Well and Take a Chance of Ruining it by Using Obsolete Methods of Detonation—?

Zero Hour Torpedo Company

General Office, P. & R. Bldg., Casper, Wyoming
Eureka, Kansas, 219 S. Elm St., Phone 774
Tulsa, Oklahoma, 710 Cosden Bldg. Dial 2-9612, Night Dial 3-1775
Factory, Boulder, Colorado

MAIL THIS COUPON
Zero Hour Torpedo Company
P. & R. Bldg., Casper, Wyoming
Without obligation on my part please send me a copy of your
Free Booklet
"Oil Well Shooting; Past and Present"
Name.....
Firm.....
Address.....

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



Our fast-stepping crew at Burbank and a Perfection Vapor Pressure Tank they subsequently erected along with scores of others on other leases.

Are You Looking for Equipment That Will Pay Dividends?

FITTING words to describe our Perfection Vapor Pressure Flow Tank used as a gas separator are hard to find.

For our language hasn't any words that describe a piece of equipment that pays regular dividends instead of being listed as an expense.

This tank is so absurdly simple too—fool proof we call it.

It will handle wells making oil and gas in any quantity—big or little, it makes no difference; it separates the oil and gas completely and makes available for lease fuel any quantity of gas you may want for that purpose. Surplus quantities can be sold to the nearest gasoline plant at the regular market price.

Of course it dispenses with a gas trap, thus saving a big extra expense.

How much will you save by this installation?

We have letters on file to show that many owners have saved literally thousands of dollars over and above the original cost.

The branch office in your vicinity can tell you all about it. Better still the local manager can equip your lease in much less time than you can get word by mail from most other tank manufacturers.

Remember, Daily Dividends Begin Immediately Upon Installation

Black Sivalls & Bryson
INC.

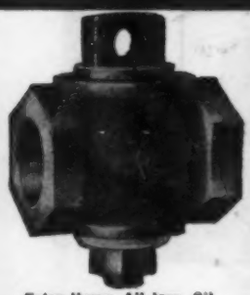
BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

FITTINGS

You Can Depend Upon

Ajax Flange Union for High Pressure Pipe Lines



Extra-Heavy All-Iron Oil Country Cock

Jarecki Mall. Iron Lip Unions are manufactured with the care that insures perfection

Jarecki Malleable Cast Iron and Brass Pipe Fittings are made in all sizes and weights

When you look upon ordinary fittings you feel that you **may** get the service you expect.

When you look on Jarecki Fittings you **know** you will.

The Jarecki mark, on malleable fittings, tells you that the material is **air-furnace** malleable—free from all the impurities and defects caused by cupola-melting.

On cast-iron fittings the Jarecki mark indicates a heavy, close-grained product built for hard usage.

On all oil-industry fittings, the Jarecki mark signifies a dependable line, honestly built, fully tested and absolutely guaranteed. Try them and compare results.

"Everything Used or Needed About an Oil or Gas Lease"

Jarecki Manufacturing Co.

Erie, Pa., U. S. A.
St. Louis Pittsburgh
El Dorado Tulsa
Eastland

Jarecki

VALVES AND FITTINGS

American Vapor Proof Equal Segment Tanks

Are Ideal in Design and Construction

Deck Sheets Interchangeable.

Side Sheets Interchangeable.

Bottom Sheets Interchangeable.

No odd size Filler Sheets

AMERICAN TANK COMPANY

OKLAHOMA CITY and TULSA

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OKLAHOMA:	Manford	Yale	ARKANSAS:	Corsicana
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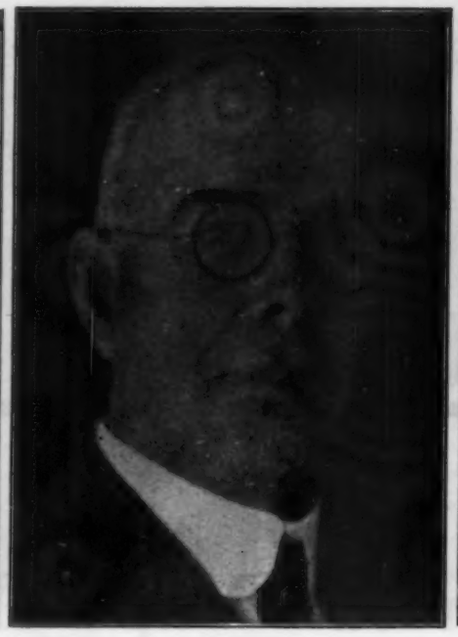
Tonkawa	Cromwell	Slick	Smackover	Ranger
Ponca City	Yeager	Duncan	Louann	Breckenridge
Barnsdall	Sand Springs	Graham	TEXAS:	NEW MEXICO:
Hominy	Cushing	KANSAS:	Mexia	Farmington
Cleveland	Stroud	Winfield	Wortham	Artesia
Hallett	Davenport	Kellog		

Say you saw it in The Oil Weekly

T. H. MILLS
Inventor of the GUIBERSON-MILLS Casing Tong



M. H. WHITTIER
Inventor of the TOOL JOINT

L. L. RICHARD
Inventor of the GUIBERSON Tubing-Catcher

The Inventors of

E. V. CROWELL
Inventor of the GUIBERSON Control Head Packer, Spiral Plug and Packers, and Tubing Oil Saver

The inventors of GUIBERSON tools were and are, without exception, practical oil men, conversant with mechanical problems and needs in the production end of the business.

The contribution of these men, as a group, towards modernizing oil field operations, has been tremendous. They originated the ideas which it later became the task of the Guiberson Corporation to perfect and apply.

"Better Be Safe

THE GUIBERSON
Box 1106,

318 First National
Bank Building,
HOUSTON

402 W. First St.,
TULSA

THE GUIBERSON

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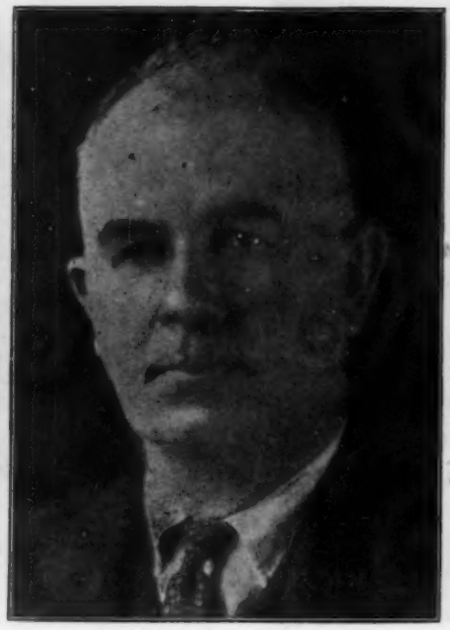
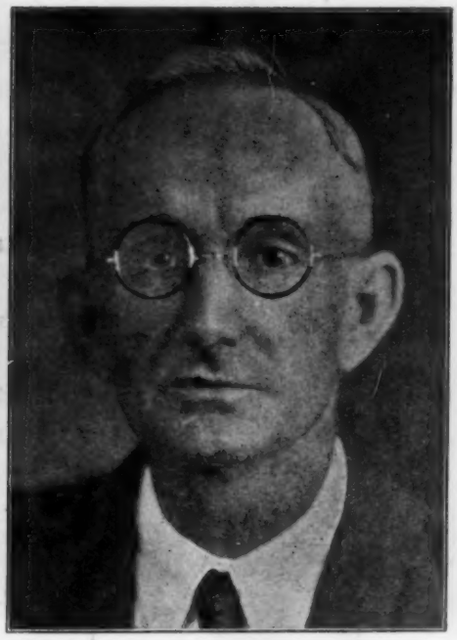
G. A. MONTGOMERY
Inventor of the GUIBERSON Underreamer



OSMYN MOWERS
Inventor of the GUIBERSON Swab



GEO. B. TREW
Inventor of the GUIBERSON Tool Joint Tong

Guiberson Tools

No GUIBERSON specialty has ever been formally offered to the industry until it had been thoroughly tested over many months in actual operation in the fields and proved to be both a needed improvement and satisfactory as regards materials and design.

Outstanding merit has carried the inventions of the men shown here to every corner of the globe.

A. L. ARMENTROUT
Inventor of the GUIBERSON Slush Pump Piston

Than Sorry"

CORPORATION
Dallas, Texas

California Branch:
1506 Santa Fe Ave.,
LOS ANGELES

506 Trust Bldg.,
NEWARK, O.

CORPORATION

Say you saw it in The Oil Weekly

The Standard Collapsible Rotary Drill passes down through the drill stem to bottom of the collar, where it expands to diameter of the hole and becomes locked in that position for drilling with 4-inch drill stem.

It can be equipped to drill a hole of any diameter between 7⅞ and 10⅞ inches, or any intermediate diameter.

It drills faster than any other bit because it has sharp cutters at the bottom practically all the time. The cutters are renewed in a very few minutes, without withdrawing the drill stem.

The drill stem remains in the hole from the time drilling begins until the hole is completed.

The time gained by not removing and replacing the drill stem together with the fuel saved during such work, greatly decreases cost of a well.

Write for folder containing full information

INVENTED, PATENTED AND MANUFACTURED BY

O. M. CARTER

W. T. HILTPOLD, SALES AGENT
206-7-8 SCANLAN BLDG.
HOUSTON, TEXAS

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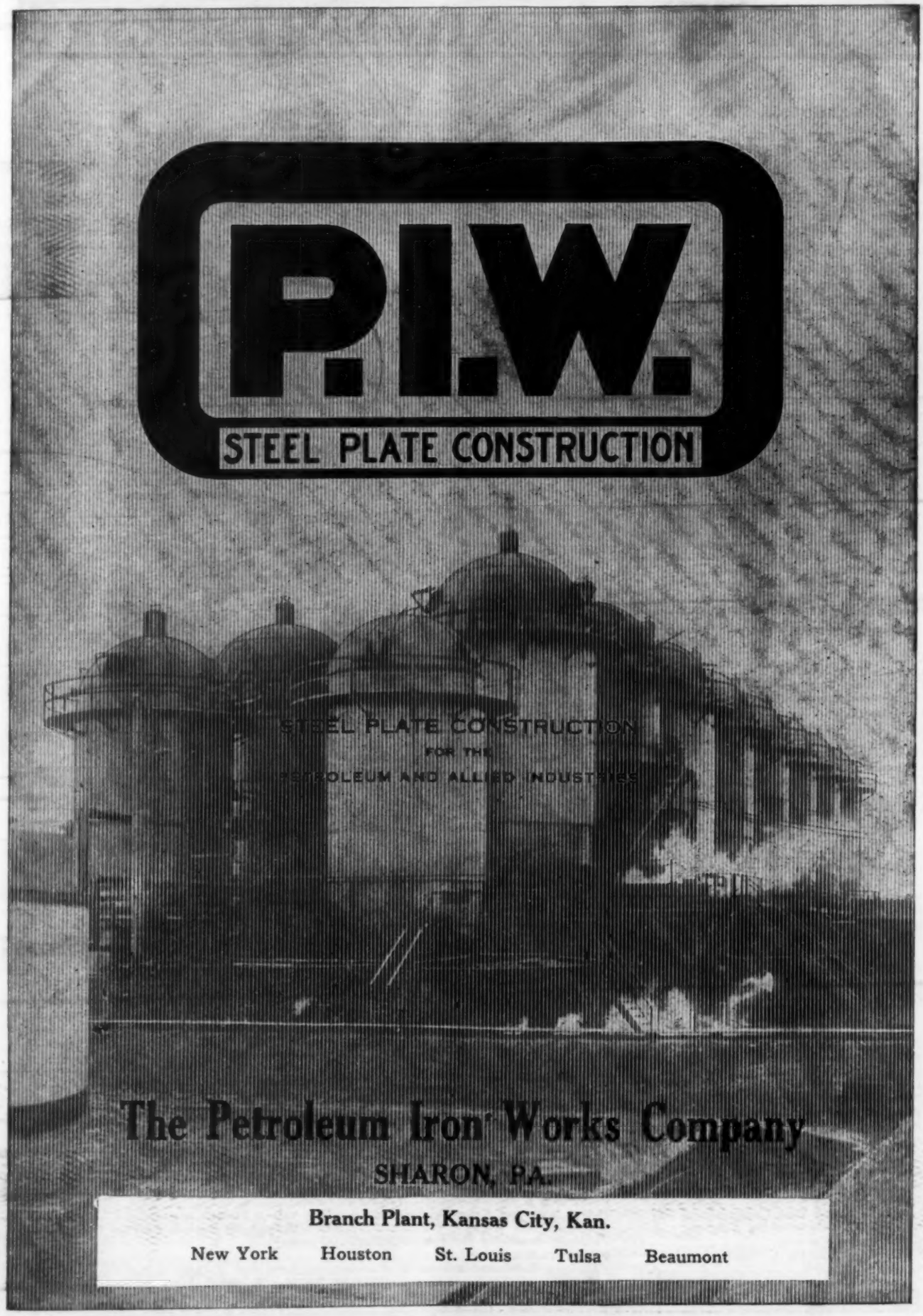

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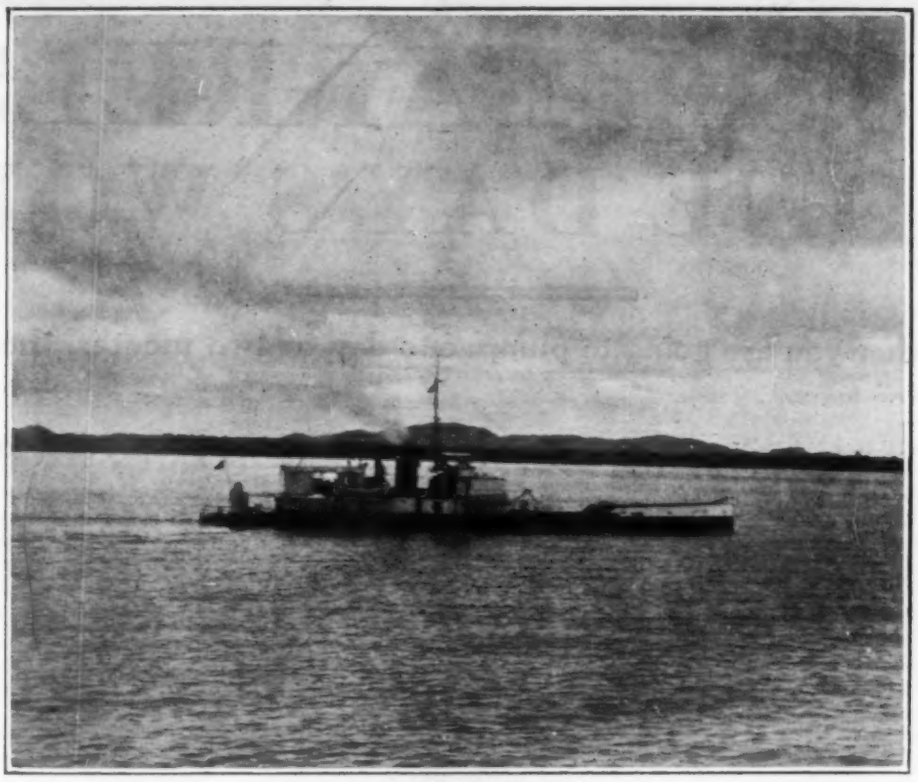

Loaded With Crude

THE OIL WEEKLY

April 24, 1925 Volume 37, Number 5

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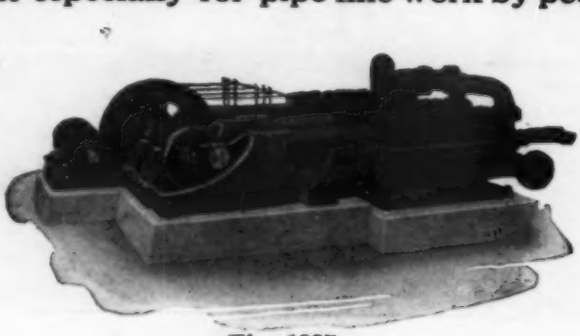

Fig. 1227

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Gasoline Purchase Relieves Market Situation

New Jersey Company takes much of surplus gasoline; The Texas Company buys up Texas crude surplus

By J. Kent Ridley
Staff Representative

FURTHER price reductions in the East and in the heavy oil districts of the Mid-Continent field do not necessarily foreshadow downward revisions in the light oil market, but do indicate a seasonable easing up of demand for fuel, as effects the heavy crude, with Arkansas deep sand wells producing a flood of oil far in excess of handling facilities.

Independent buyers in the East and West, as well as in the Middle West and Southwest have not ceased their activities in procuring crude, but are proceeding more cautiously and with less zeal, and in most instances without the inducement of premiums.

Stronger in North Texas

A stronger tone in both crude and refined markets in the North Texas district was in evidence early this week as result of relief given ten independent refiners on surplus gasoline stocks by the distribution of shipping instructions on approximately 675 cars by Standard of New Jersey for delivery over the next 30 days at a price of 11.2 cents per gallon f.o.b. Baton Rouge, La. The purchase of this quantity of gasoline together with the recent purchase of approximately 700,000 barrels of high gravity crude from producers and independent refiners by The Texas Company has removed all "distress" stocks of crude and gasoline from the North Texas market, and no further serious accmuluation of stocks is expected to occur before the heavy summer demand for motor fuels arrives.

Efforts being put forth by major producers to acquire additional oil producing properties in the high gravity fields in North and Central Texas is commanding more than passing interest, and adds weight to the opinion of those predicting that Mid-Continent district light crude will not experience a drop in price similar to the reductions made recently on Eastern crudes and heavy oils in Arkansas and the Coastal region.

Prairie, Texas, Magnolia, Humble and Roxana are displaying the greatest interest in building up their high gravity oil production in North and Central Texas through the purchase of established oil producing properties, and these companies have representatives working the fields in search of desirable properties to purchase. The Texas Company has purchased oil properties in Wortham, Archer County, and Callahan County since late last January aggregating a total expenditure of $3,100,000, and is reported to be negotiating for all the properties of a Wichita Falls company located in the Carey and Hill & Roberts pools representing a consideration of more than one million dollars. Prairie is examining titles to exercise its option to buy all the producing properties of the Mahlstedt-Mook Oil Company amounting to slightly more than 1000 barrels daily in Brown, Archer, Eastland and Stephens counties. Magnolia and Roxana are reported to be making gauge tests on producing properties, while Humble recently paid $1,100,000 for a single lease in the South Vernon field.

Humble Large Purchaser

Since Humble took the initiative early last week in reducing the posted price of Gulf Coast crude 25 cents per barrel, and led in reducing gasoline tank wagon prices in Texas 1 cent before the close of the same week, some uneasiness was displayed in market circles for fear this company would carry its price reductions to the high gravity oil areas in North and Central Texas. Humble is producing and purchasing high gravity crudes in North and Central Texas to the extent of more than three times the rated capacity of its four refineries, and last week contracted to purchase 7500 barrels daily from the Big Lake Oil Company for a period of 30 days with deliveries to be made in tank cars from the Big Lake field. Besides this crude contract Humble is taking and purchasing about 10,000 barrels daily from this field on a contract made with the Reagan County Purchasing Company, and the latter crude began moving from the field via Humble's completed 8-inch line to the Comyn junction of its main trunk line system in Central West Texas. The first crude was put in this line on the morning of April 18, and when the machinery becomes limbered up Humble will be able to move about 18,000 barrels daily from the Big Lake field to the Gulf Coast.

Big Lake crude will be moving to Gulf Coast points via tank cars and pipe line in excess of 20,000 barrels daily before the close of the month, according to present plans, and sufficient production is being brought in to augment this amount. The Big Lake Oil Company's University 18 was brought in making 8753 barrels last week at 2928 feet, and was flowing more than 300 barrels per hour Monday, with no indications of a quick decline taking place.

Refiners' quotations on gasoline were advanced approximately a full cent per gallon after the placing of the big order by Standard of New Jersey, and early this week U. S. motor grade was in fair demand at 10½ to 10¾ cents, with the latter price more prevalent. Domestic and export buyers were attracted to the market immediately on receipt of the news of Standard's purchases, thereby contributing support to a stronger market price after the "distress" gasoline was removed. Prices must reach a higher level before refiners can operate with a profit on present crude costs, and the relief given small plant owners on surplus stock paves the way for such a change in conditions, while comparatively no cheap gasoline is in the hands of brokers to compete with refiners in restoring a normal price level.

Change in East

That the latest revision in the Appalachian region came rather unexpectedly must be admitted, but the action of the Seep Agency is taken as indicating that the crude market there was out of line as compared with the price level in the Mid-Continent and in the Rocky Mountain States. Such a view of conditions must be characterized as an optimistic outlook for now that the Pennsylvania producers have had it impressed upon them that the top price has already come and gone few there are but who are evidencing a willingness to dispose of current production at prevailing pipe line quotations. Such crude in the Appalachian region as is going to independent refiners is commanding a slight premium in some instances and on contracts that have been entered into prior to this spring the premium is quite an attractive one.

In the Mid-Continent light oil area the demand for high gravity oil is good, although most of the competition for this grade is between the larger buyers and not much from the smaller independent refiners. Premiums except on long time contracts that in most instances were consummated last winter or the early part of the year, are the exception rather than the rule. In Kansas independent purchasers are obtaining sufficient crude without a premium inducement in most instances.

In the Rocky Mountain States pro-

ducers in the Salt Creek field in Wyoming who have agreed to sell their oil to the major purchasing agencies in that section, including Mid West, Producers and Refiners, The Texas Company, White Eagle and others, are also agreeing to have their oil purchased on a gravity basis the same as the Prairie gravity scale now in effect in the Mid-Continent. These contracts are from one to five years. It is understood that the Prairie Oil and Gas Company, acting through Producers and Refiners and Kasoming Oil, is desirous of obtaining a supply of black oil produced in Central Wyoming and producers of this grade are understood to have been approached on the proposition. Such a move on the part of the Prairie would indicate the installation of an asphalt plant at the company's refinery at Parco, Wyoming.

The Mule Creek field in Northeastern Wyoming has not yet been opened up. This is largely due to the unsatisfactory condition of the Eastern market at present and also partly due to freight charges that are now in effect. This field was to have been opened up around April 1.

The Illinois Pipe Line Company handles most of the production from the field and Ohio Oil Company and Western States and Land, (Mid-West Refining) control most of the production.

California Holding Own

There is little fear of a cut in crude prices in California, although the steady production is slightly a disappointment to many of the statisticians, who had expected a decline around this time. The desire for crude connections in the light oil fields is steady and on a par with conditions for the past three months.

California operators are watching conditions in the East and Mid-Continent, and the most recent cut in Pennsylvania was rather disheartening to them, although they feel that the cut will not likely reach to the Mid-Continent. The situation in California can stand a small cut in Mid-Continent without being affected, but a cut of as much as 50 cents a barrel in Mid-Continent may force a readjustment of prices to meet competition.

The refined market is a little weaker, but not to an extent that is generally felt. Considerable crude and refined products are being shipped to foreign and Eastern points, thus helping out the local storage situation. Shipments of the past six weeks will likely continue the basis for the next three months, due to contracts. California operators feel that the Smackover situation in Arkansas is largely local, affecting only the fuel oil market on the East coast.

Standard Officials Tour New Properties

Chicago, Ill., April 22.—The first of a series of meetings between officers and directors of the Standard Oil Company (Indiana) and the representatives of the interests associated with the Standard Oil Company (Indiana) in acquisition of the controlling stock of the Pan American Petroleum and Transport Company with the Pan American organization took place at the Racquet Club in New York City on the evening of April 14th.

The principal address of the evening was made by Colonel Steward, who was supported by the remarks of each of the new directors of the Pan American Company in assuring the existing organization that the change in control of the company did not involve any change in operating personnel nor limitation in the opportunity of every Pan American employe and officer to advance in the company's service, and that the change in control would not bring about any change in the business policy of the company, the operations of which under the new management would be conducted as aggressively as in the past. On the part of the old Pan American officers assurances were given that service to the company would be just as loyal as had been true under the former management.

Immediately after the conclusion of the meeting the plans were perfected for similar meetings of the same type in the Mexican fields and at New Orleans.

On April 17 officials of the Standard Oil Company (Indiana) and Pan American left Chicago for Mexico, where they were due to arrive on the morning of April 21. Four days were to be spent in meeting the organization, inspecting the refinery and all other properties. These officials are due to leave Tampico on April 24 on the return trip, which will be by way of New Orleans.

The company owns more than 1000 acres of land at Destrehan, near New Orleans, upon which is located a refinery with a capacity of 25,000 barrels daily.

Those included in the party which left Chicago are as follows: Colonel Robert W. Stewart, chairman of the board of directors, Standard Oil Company, Indiana; W. M. Burton, president; Beaumont Parks, vice president; Allan Jackson, vice president; E. G. Seubert, vice president, secretary and treasurer; E. J. Bullock, director of purchases; R. H. McElroy, director of traffic; John D. Clark, vice president; Joe Novotti, secretary to chairman of the board; Fred H. Wickett, chairman of the board of the Pan American Petroleum and Transport Company; Harold Walker, vice president of the Pan-American and J. L. McKeever, assistant to the president of the Pan American.

Made President of the International Petroleum Exposition

W. G. SKELLY
President of the Skelly Oil Company, recently elected president of the International Petroleum Exposition which is to be held in Tulsa from October 1 to 10.

Directors of A. P. I. Make Changes in Board

New York, N. Y., April 18.—At a meeting of the board of directors of the American Petroleum Institute held here recently, James E. O'Neil of New York, former president of the Prairie Oil and Gas Company, who is in Europe, resigned his place on the board and W. S. Fitzpatrick of Independence, Kansas, chairman of the board of the Prairie, was elected to the vacancy.

W. M. Welch of Tulsa, Oklahoma, former vice president and general manager of the Tidal Refining Company and former president of the Association of Natural Gasoline Manufacturers, also has resigned as a director of the A. P. I. and D. E. Buchanan, also of Tulsa and vice president of Chestnut and Smith Corporation, has been elected to this vacancy. Mr. Buchanan is president of the Association of Natural Gasoline Manufacturers.

Water Supply Is Always Field Problem

Some sidelights on how to obtain and maintain sufficient supply for large users

By Harry Pennington
Mechanical Engineer

THIS article deals with underground water and its recovery in quantity. While conditions surrounding the accumulation of ground water differ in various localities, the subject matter will hold good generally for ground water recovered from sands.

Any water supply in contemplation necessarily requires analysis with reference to hard and soft scale forming solids and salts before any further work is done toward development. If the best supply obtainable is hard, a water softening plant can render it usable in boilers with a lower plant operating cost than with hard water as found. But water with an excess of salts cannot be treated to make it suitable for boiler feeding; no commercial treating process has yet been devised that will handle salts in water for removal or rendering harmless.

The carbonates form soft scale forming solids; the sulphates, hard scale forming solids; salts make the boiler foam. In searching for a water supply, these should be fixed at a maximum and any water above this rejected as a possible source.

Ground water accumulations in sands are from water percolating into the sand and flowing down the dip. Percolation may be directly into the sand at its outcrop or, if the sand is shallow in depth to it from the surface, water may percolate directly down to it through upper porous layers. And, when the sand is underlaid with an impervious bed of some kind, as clay for instance, the sand then constitutes a reservoir through which water flows.

It might be well here to divide ground waters into those found deep and those shallow along the lines that the deep sands cover wider areas and are well known, while the shallow sands containing water are more or less local and more difficult to find.

The deep sands from which water is recovered may be illustrated by the Trinity, Paluxy and Woodbine, of North Texas: the Dakota of the upper Mississippi Valley and the Artesian Belt sands of the Gulf Coast. The outcrop of the Trinity Sand being about one hundred and twenty-five miles west of Fort Worth and the dip southward and eastward, the depth at Dallas is about 2800 feet and the sand is about 150 feet thick. The outcrop of this sand is expressed in large areas covered by sand such as those found at Desdemona. These sand beds receive rainfall with very little run off and water so accumulated travels down the dip. The surface elevation being greater at the outcrop than at Dallas, wells in this sand flow large quantities of water initially.

In its travel through the sand, this water dissolves the cementitious material from the sand, lime, and the water is rather heavily charged with solids, although these are removed quite easily by softening plant.

Local sands are those covering a small area; these are of importance in that they may furnish a supply where waters found lower down are not suitable for boiler use. There are some districts, as in the Wichita Falls country, where waters found at a depth are highly mineralized and unsuitable, but where shallow waters may be found in quantity that are suitable.

These shallow waters, and I mean by that, waters found shallower than 100 feet usually accumulate in and follow natural drainage lines; the water shed of a small steam bed may have a surface layer of porous material that will gather water, deliver it into a lower sand, whence the water may travel down the dip and the location of a station at a correct point may recover such waters. The writer has built a number of such plants along these lines, successfully operated for years. These waters usually do not have an opportunity to become mineralized, though there are salt beds in some places that charge the waters passing through, particularly in those localities where the geological formations are such as to have tended to mineralization during the time of deposition. The Permian is such formation.

As a general proposition, underground water is always in motion, flowing down the dip of the stratum containing it, and all water may be traced to its source and its accumulation there explained. We are not dealing with geology, but with the mechanics of fluids in this discussion.

The direction of flow underground may be obtained by ascertaining the static level of water in three wells located, say at the points of an equilateral triangle. Three wells are necessary because one defines a point, two a line and three a plane, and when the levels are referred to a common datum plane, the direction of flow is evident. Velocity may be directly measured, and because underground velocity is a measure of the supply, it necessarily should be measured. This may be done by taking two wells along the line of flow as indicated by the levels. By pumping brine into the upper well, the rate of flow to the lower well may be measured by immersing a galvanic couple in the lower well and connecting it with a mirror beam galvanometer. This may seem to be a useless refinement but investments in wells, pumps, engines and pipe lines may be such that to make positive assurance that the required quantity of water can be obtained is necessary. This work would require three or four days, and refers to shallow waters; the deep waters are usually well known.

In the design of plant, the writer has proportioned them so that the daily withdrawal does not exceed the replenishment from flow underground, so as not to draw upon the reservoir capacity of the sand. This is evidently a measure that will insure permanency, for to draw so heavily as to deplete the water content means eventual exhaustion of reservoir capacity and a reduction of plant capacity to that of the replenishment anyway. From which it is seen that measurements of velocity are quite necessary to the correct solution of such water problems.

Underground velocities vary widely, depending upon the slope of the stratum and upon the porosity. The

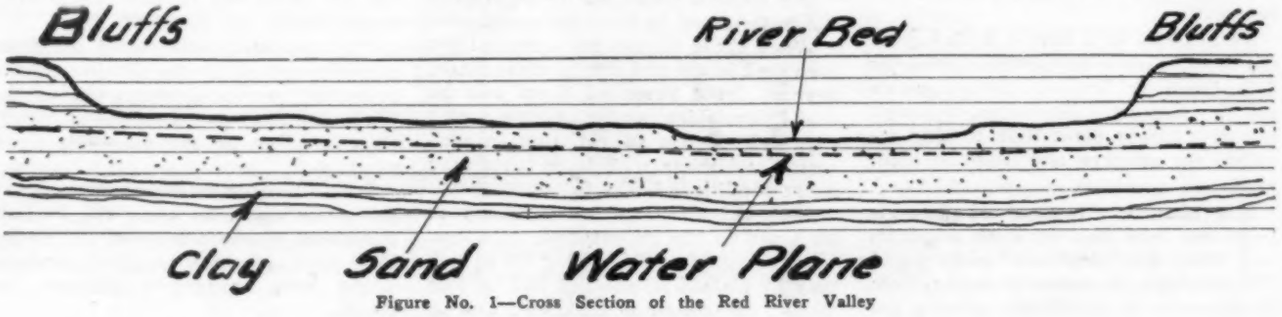


Figure No. 1—Cross Section of the Red River Valley

writer has measured velocities as high as five hundred and seventy-five feet per day, through gravel, down to as low as eight feet per day in fine sand.

Many river valleys have an underground water sand that can afford

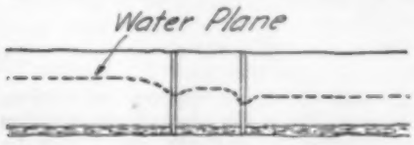


Figure No. 2—Interference of wells along line of flow

large quantities of water that is of different origin from that in the river and, in some cases, the stream bed even may be dry except at flood times. Some of these are the Rillito in Arizona with a dry stream bed; the Arkansas River in its upper reaches in Kansas and Colorado, where the flow is variable and sometimes not at all; Red River; the South Fork of the Platte; and others.

A typical cross section is shown in Figure No. 1, which is across Red River in Wichita County, Texas. At this point, the river has no surface flow, but the sands of the river bed contain highly mineralized water flowing slowly down under the river bed. Where the waters flowing into these river bed sands from the sands away from the river, meet the river waters, a line is marked of potable water and of salt water, and the recovery of usable water therefore became a problem of intercepting the flow toward the river because, to draw upon the reservoir capacity of the sand meant that salt water from the river would enter the system.

Since all water underground is in motion, unless a barrier of some kind prevents, it follows that a recovery line of wells would be located across the line of flow, rather than along the line of flow, or scattered indiscriminately over an area. When two wells or more are located along the line of flow, interference is set up, shown in Figure No. 2. The first well lowers the water plane, necessarily, to withdraw water in the given quantity, and the second well cannot withdraw as much as the first because of this depression.

And, when wells are too close together across the line of flow, interference is also set up, although when the sand is fine, closer spacing may be necessary.

An example of a line of wells across the line of flow is at the Alta Loma Air Lift Pumping Station, Texas, which supplies water for Galveston, although this is a larger plant than usually required for refinery and gasoline plant work.

The normal direction of flow is southeast; the line of wells is 17,300 feet long; and there are thirty wells. The possible recovery of water from these wells is 15,000,000 gallons per day, although the city does not require that much. The air lift pumping station, designed by the writer and constructed under his supervision in 1909 has furnished a continuous supply.

Every well has a definite static head or fluid level. When water is with drawn by pumping, the level lowers, due to friction of water travelling toward and up the well bore, the static head lowers, and a direct measurement of this may be had by ascertaining the depression of static head with a given delivery of water. For instance, if the head lowers 100 feet and the level depresses 50 feet, when the well is delivering 100 gallons per minute, the depression factor is two, or, for each foot of depression, the water level lowers two feet. Then, when the head is lowered 100 feet, the delivery will be 200 gallons per minute, less a small amount due to higher velocity setting up frictional resistance. This well factor, though, holds fairly constant.

To say that a well delivers 50 gallons per minute is not usually a measure of its performance, or a measure of quality of the workmanship of making the well, but a free flowing well is always indicated by a low depression factor. And a guarantee of water supply, without any guarantee as to the depth to which pumping must be done is an inadequate guarantee, because to get the water it is only necessary to go deeper and pump more with the pump set lower down.

In many applications of well factors as outlined above, possible deliveries have been ascertained and pumps set by the well factor to secure the necessary quantity, although, when doing this, the quantity obtained should not draw upon the reservoir capacity of the sand, else the pump will have to be set continually lower and lower to maintain the supply. Additional wells in such case would be the better procedure, for securing a permanent supply. The depression factor, applied to wells by the writer in 1904, is quite an important gauge that may be applied to wells, either oil or water, since it is a direct measure of the free flowing qualities of a sand and workmanship.

The depression factor depends upon:

The porosity of the sand formation;

The dip and difference in elevation between the outcrop and the well mouth and the consequent hydraulic gradient from outcrop to entrance into the well bore;

The method employed for separating the water from its sand reservoir.

When these factors are obtained for each well in use and comparisons made, beyond doubt some of them will be found furnishing water at lower cost than others, due to variation in well factor and those with high costs may be re-conditioned.

Also, these factors are necessary at all times to the maintenance of a system of wells; the finishing of a well may be classed as good or bad by this factor; the condition of a well can be observed continuously and when the factor lowers so that it indicates the well is getting in bad condition, suitable remedy may be employed.

Whether a sand is fine or coarse, the porosity may be the same; although the pore spaces in coarse sand are larger, they are not so numerous as those in fine sand. Porosity depends upon the uniformity of sand grains. If all the sand grains were spherical and uniformly of the same diameter, the pore spaces would be 47.6% whether the grains are large or small. Low porosities are due to graduated grain structure, the smaller particles filling the spaces between the larger and porosities therefore range from 12½% to 35%, so that the water content may be from 12½% to 35% of the sand volume.

And, taking the area of a cross section of the sand stratum across the line of flow and the porosity, the average quantity of daily flow of water may be estimated, when the velocity is known.

Not all of the water from any sand is recoverable because capillarity and adhesion prevent. And because capillarity is greater in small spaces than large, it follows that fine sands do not permit as great recovery as coarse. For instance, take a quart measure of sand passing through a 30 mesh screen and another quart measure of sand passing through 60 mesh screen. Pouring in water until each measure of sand is submerged, then opening a hole at the bottom of the measure, more water flows from the 30 mesh sand than from the 60.

TO BE CONCLUDED IN NEXT ISSUE

Commission Holds Roxana Not Common Purchaser

Oklahoma City, April 20.—On the ground that the Roxana Petroleum Corporation is not a common purchaser of crude oil, the Oklahoma Corporation Commission entered a decision Saturday against the J. A. Hull Oil Company of Tulsa in its claim for payment for oil taken below the Prairie posted price.

The decision was to the effect that no evidence being given that the Roxana is a common purchaser, "claiming the right to carry or transport crude oil or petroleum or any of the products thereof, by pipe line for hire or otherwise," the defendant corporation could not be compelled to pay the amount demanded by the plaintiff.

The complaint arose after the Roxana changed from the Prairie posted price last year and began paying the Hull Company on a basis of prices then in effect by the Magnolia Company.

It is intimated in the decision that a successful effort to show the Roxana Petroleum Corporation and the Ozark Pipe Line Company as allied concerns might have brought a different decision.

Big Lake Oil Now Moving Through Line

Daily production now more than line capacity with million barrels in tanks; rail movement continues

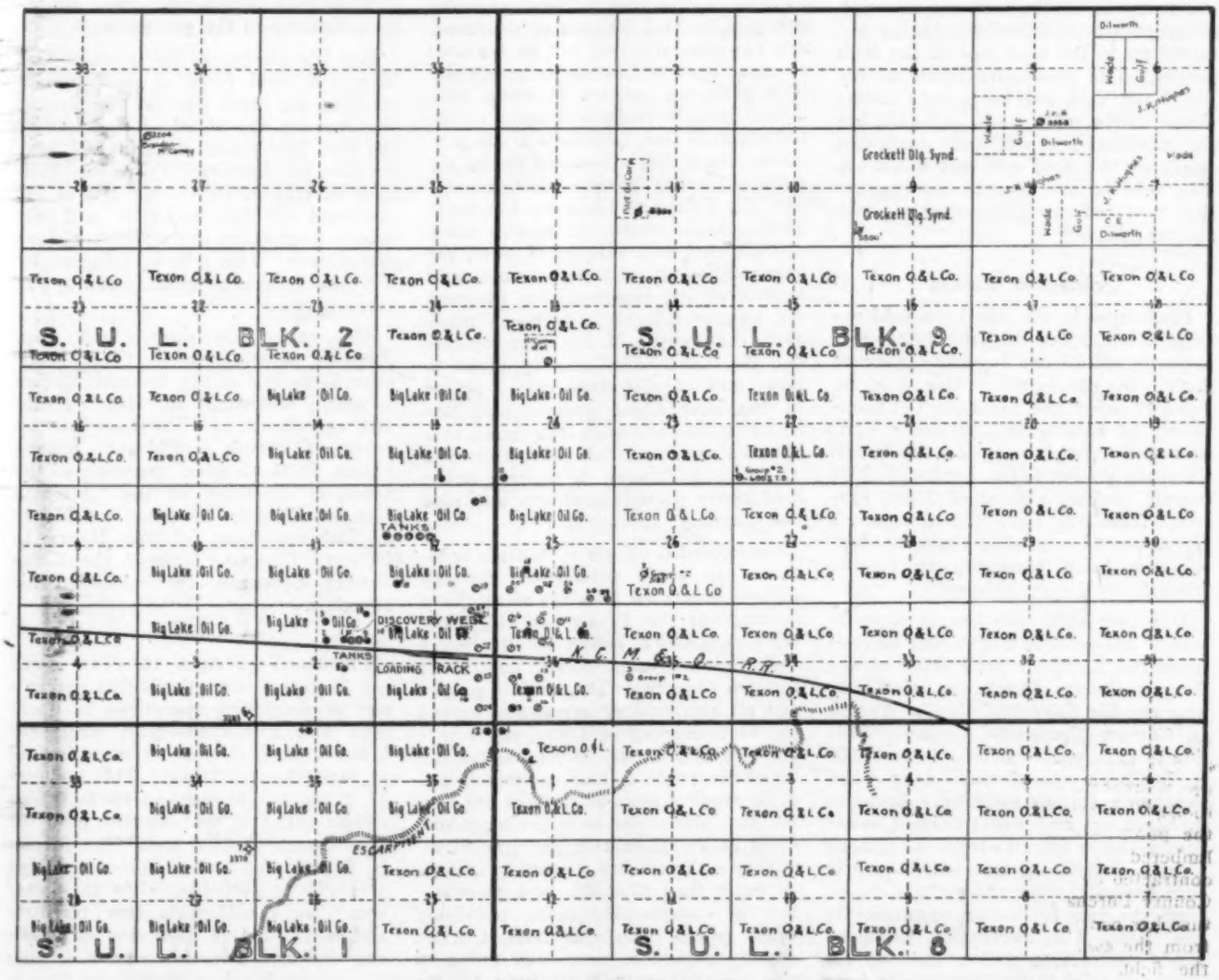
By H. H. King

Staff Representative

San Angelo, Texas, April 20.—A record producer for the Big Lake oil field in West Texas preceded the completion and running of the first oil in Humble's pipe line outlet for the field last week, and steady production increase has necessitated the making of additional crude contracts to permit further developments in the field. The Big Lake Oil Company's University 18, located in the center of the southwest quarter of section 25, block 9, and a half mile north of nearest production, flowed 8753 barrels by actual gauge during the 24 hour period ending Friday morning after being deepened to 2928 feet, thereby enhancing the potentialities of this light oil producing area. On the morning following this record production, crude from the field was turned into Humble's eight-inch line for the first time to be pumped to the Gulf Coast via the Comyn junction of Humble's Central West Texas trunk line system. The Big Lake Oil Company is preparing to handle 7500 barrels per day in tank cars over a period of one year above present pipe line commitments, and has contracted to start shipping in tank cars 7500 barrels per day over a period of 30 days at the posted price.

According to an official statement from the company, this shipment is going to one of the major purchasing companies which is reported to be the Humble.

The heavy production registered by the Big Lake Oil Company's University 18 came after the hole was deepened on April 15 from 2923 feet to 2928 feet. This well logged the top of the salt at 1055 feet, and the big lime at 2770 feet. It was partially drilled in on April 12 with an initial flow of 65 barrels per hour from pay at 2899-2923 feet, and was holding at 1429 barrels daily when the cable tools were sent five feet deeper into the sand pay. The well is making about one million cubic feet of gas along with the flow of oil, which is free from water or cut oil, and the stream of oil feeding into the large battery of tanks is supported by consistent pressure. Structurally it is the highest producer in the field, and indications are that the sand pay is softer at this point, therefore gives up its oil contents at a faster rate and in a greater volume. Texon Oil and Land Company's University 3, which is the second largest producer in the field at present, is exactly one-half mile to the



Up-to-date map of the Big Lake field in West Texas

south, while Big Lake Oil Company's University 11, which has produced close to 600,000 barrels since July 31, 1924, is less than one mile to the north and slightly east, indicating a flush area of large proportions.

While the field crew of the Big Lake Oil Company was fulfilling the task of handling the big flush from the University No. 18, the Texon Oil and Land Company's University 2, Group 2, located in the center of the southwest quarter of section 26, block 9, and exactly one mile due east of the gusher, drilled into water at 3185 feet, indicating that the oil producing area breaks off within the mile stretch separating the two locations. Texon's University 3, Group 2, located in the center of the northwest of southwest of section 35, block 9, and about one mile south of the No. 2 failure, has reached a depth of 3040 feet, with indications of being dry also. Texon's University 1, Group 2, located in southwest corner section 22, block 9, proved dry after drilling to 6002 feet. It is presumed that a fault extends northeast to southwest across the Texon Company's Group 2 leases in order to account for the two failures and possibly a third one on the east side of the proven area, with prospects of good producers being obtained up to the west side of the fault proper. The productive limits of the Big Lake field are fairly well determined to the west, south and east, but the northeast, north and northwest edges of the field are still unknown. The field is now proven for production two and one-half miles in width and length.

Production Record

Production in the Big Lake field averaged 19,135 barrels daily last week, and a record for one day was registered during the 24 hours ending 7 a. m. April 17, when the Big Lake Oil Company's 13 flowing and pumping wells produced 15,708 barrels and the Texon Company's six wells produced 7945 barrels, making a total of 23,653 barrels. The Big Lake Oil Company's University 18 is holding above 300 barrels per hour, according to reports from the field early this week.

Humble's eight-inch line is approximately 200 miles in length, and extends from the Kempner tank farm of the Reagan County Purchasing Company near the Big Lake field via San Angelo to Comyn, Comanche County. This line is expected to handle from 17,000 to 20,000 barrels of crude daily when the pump station machinery becomes limbered up, and will transport crude contracted by Humble from the Reagan County Purchasing Company, which in turn has contracted and gathers the oil from the two producing companies in the field. The Purchasing Company holds contract to gather and pay for a maximum of 10,000 barrels daily from the two producers at the average Mid-Continent gravity price, and after December 1, 1925, the contract calls for maximum purchase of 20,000 barrels daily from the same parties and from then on for the life of the leases. More than one million barrels of crude have backed up on the Reagan County Purchasing Company in the field while awaiting the completion of Humble's line, and Humble will hardly have time to remove this storage oil along with current deliveries from the wells, before the date falls due for the purchases to be increased to 20,000 barrels daily. Humble has virtually assumed the contract made by the purchasing company with the two producing concerns, and is paying the purchasing company 20 cents per barrel gathering and storage charges.

Since the Big Lake Oil Company has another producer in the making, eleven additional tests underway, and already considerable more production than present pipe line commitments, arrangements are being made to handle 7500 barrels of crude per day over a period of one year in tank cars beginning May 15. Its present tank car rack at Texon, located on the Orient Railroad and in the oil field, is being enlarged to load 50 cars at one time, and two special trains will be required to move the 7500 barrels daily. A six-inch gathering system is being connected from its wells and tanks to the loading rack line, to handle crude produced above that contracted for by the Reagan County Purchasing Company. The Big Lake Oil Company has made arrangements to ship its surplus crude in tank cars at a rate of 19 cents per hundred pounds, and load same aboard tankers on the Houston Ship Channel. No announcements have beeen made as to the identity of the company that the Big Lake Oil Company plans to make tank car deliveries over a period of one year above present pipe line commitments, although it is known that Humble is interested in augmenting its crude purchases in the Big Lake field above present contracts and pipe line capacity.

Unsuccessful efforts of outside companies to score production through wildcat efforts on all sides of the joint holdings of the Texon and Big Lake Oil Companies in recent months leaves the producing area in full control of the two concerns. The oil field proper and all surrounding acreage is owned by the University of Texas, and a one-eight royalty is paid to this institution. Since the crude is now commanding a price ranging from $2 to $2.25 per barrel, and production is in the neighborhood of 20,000 barrels daily, the University of Texas has a monthly income of more than $150,000, with possibilities of considerably more, providing crude prices remain unchanged. The royalty payments have been going to the permanent building fund of the University of Texas, but the Legislature recently enacted what is known as House Bill 246, which directs that the University land royalty shall be credited to the available fund. The constitutionality of this act is being questioned, and a heated controversy arose between state officials over the assignment of the last royalties paid by the Big Lake field producers.

Four Full Days for Gas Men At Atlantic City Meeting

Members of the entertainment committee of the Annual Convention of the Natural Gas Association of America, to be held in conjunction with the Natural Gas Supply Men's meet in Atlantic City, May 18, 19, 20 and 21, have outlined a four day program filled to the brim with activity.

Technically and socially, something of interest for every minute of the convention's duration has been provided.

Informally, the convention will open Monday morning, May 18, with a meeting of the Technical Research Committee in the Traymore Hotel. The committee will hear reports from sub-committees on gas measurement, Utilization and transportation, all salient features of the gas business.

Monday afternoon, the Natural Gas Men will hold forth at their annual meeting on Steel Pier; while during the evening, the board of directors of the Gas Men's organization will hear reports of Secretary-Treasurer William B. Way of Pittsburgh, and of the chairman of the Technical and Research Committee and appoint various committees. This will be followed by a typical seaside program, given by the supply men.

The convention proper will open Tuesday morning, when Chief Engineer Kettering of the General Motors Company will speak on "Heat", a subject considered of vital import to all companies selling natural gas. Among others, P. G. Gossler, chairman of the board of directors of the Columbia Gas and Electric Company, and Henry L. Doherty, head of the Henry L. Doherty Company and of the Cities Service Company, are scheduled for speeches.

Panuco, Ver., April 18.—The Mexican Seaboard is continuing its percentage of successful operations in Cacalilao and within the past week has brought in new production estimated at 16,600 barrels initial. This includes Well No. 163, brought in for 8000 barrels at 1845 feet, and No. 161, goor for 8600 barrels at 2070 feet. The former is in an absolutely non-competitive area of the hacienda, while the latter opens up considerable new territory and is 360 meters from the northeastern Cacalilao line, adjacent to Chapacao of the Mexican Petroleum Corporation.

Forms Simplify Keeping Track of Leases

Pulaski Oil Company keeps full history of leases on small sheet form giving all data

By W. Lee Sloan
Staff Representative

TWO concise forms to cover the intricate facts connected with the purchase of leases have been worked out by the Pulaski Oil Company of Tulsa, Oklahoma.

Hundreds of systems have been installed in an effort to expedite the movement of a transaction of a lease purchase since it became necessary to have a simple history of the purchase before the executive head of the land department and it is the outgrowth of the pioneer work of others that the Pulaski Oil Company has accepted the form now in use. This company, like all other successful ones, thinks that if a lease is worth purchasing, it is worth watching at all times.

It would be unfair to enumerate the losses of some of the larger companies because a lease rental was not paid. But it is not an exaggeration to say that some of the most valuable leases now producing oil have been lost by the negligence of an employe who has failed to place the lease record in the right place in the file.

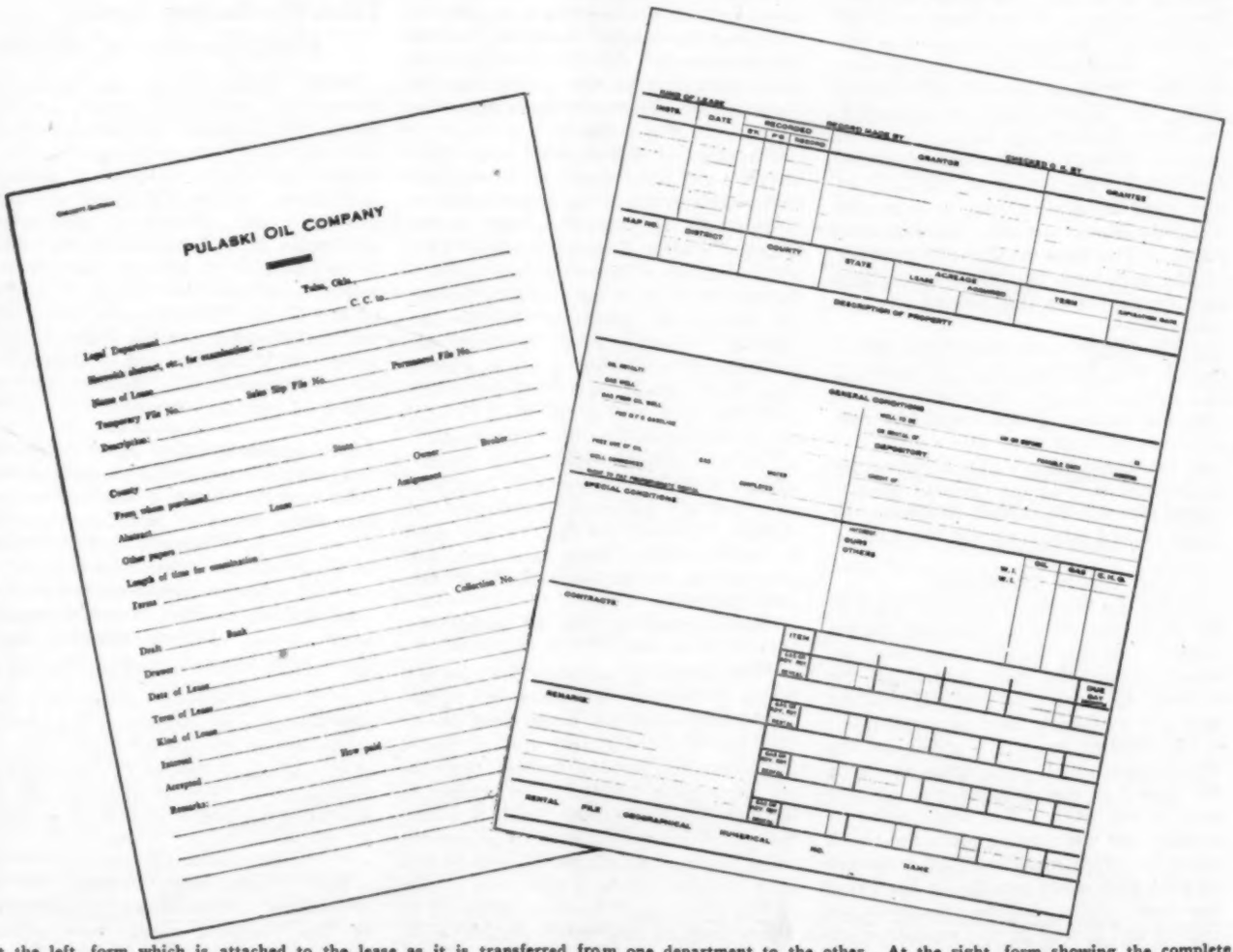
Complete History Necessary

It is therefore necessary to have a complete history of every lease indexed in a file which is accessible at all times to the head of each department connected with lease purchases and the payment of rentals.

There are but few things in a lease which have an important bearing upon the situation. That is, there are few compared to the entire lease forms. It is these few important things which are segregated from the rest and placed upon the form which is shown in the accompanying illustration. In the event it is necessary to refer back to the original lease, the index sheet tells the complete story of where it can be found at once.

Loose Leaf System for Rentals

The loose leaf system, of which the accompanying form is a part, holds the sheets in numerical file as to the date on which the rental is due. Each month has a section in the file and under each month the date the rental is due is the determining factor in placing the sheets in the file. Each day the lease rental man refers to this file and makes out a request for a check to the accounting department. Each request is made out 30 days before the rental is due. After the request is made out it is attached to the index sheet and it remains attached until 15 days before the rental day. It is then sent to the



At the left, form which is attached to the lease as it is transferred from one department to the other. At the right, form showing the complete history of a lease as is used by the Pulaski Oil Company of Tulsa.

accounting department and the lease rental man is relieved of all responsibility. It is up to the accounting department to send out the check to the bank.

The second form shown in the accompanying illustration is made out by the land department when a purchase of a lease is made. It is attached to the lease assignment form and first sent to the legal department for examination as to title and description. The form also carries the complete history of the lease when it has finished its routine of travel. It is from this form that most of the information is transferred to the first form. The information not contained on this slip is taken from the lease itself.

Absolute Check on Departments

It will be noticed that the first form has a place for each man handling the lease to O. K. the transaction and to place a check mark to indicate the O. K. In the event any part of it is ultimately found wrong, it can be checked back to the man who has made the mistake.

General Conditions

On the top part of this first form the complete history of the lease is entered as to its kind, the lessor and lessee, the location of the lease and the terms of it. The center record is the "general condition" of the transaction. On the left hand side of this center record, the royalty facts are recorded. This form is outlined to take care of a gas or oil well. It also takes care of such other information as the kind of fuel used in drilling the well in the event the lease carries a drilling obligation. The date of the commencing of the well and the completion date also are shown on this side of the record.

On the right hand side of this center record, the drilling time is recorded. The exact time for the commencing of a well is shown. In the event the lease is a commercial one, the rental due date is shown also. The bank or depository shown on the original lease is shown on this form and to whom the credit should be made to at the bank.

Special Conditions

Under the "special condition" part of the form, the working interests are recorded. In the event it is a joint interest account the exact interest of the Pulaski Company is recorded along with the remaining interest to others.

The bottom record is given to the rental department. The dates on which the rental is due is filled out on this part of the form. The small columns to the right are used to place the check mark in. This mark is "PD" indicated as paid with a red pencil. In the event the lease with a drilling obligation attached and a well is successfully completed, the royalty payments are entered in the place shown on the form. Contract numbers are given a place on this lease form and these numbers correspond to their original number which are kept in another file. There is also a place for "remarks."

It is not necessary to go into the intricate details of this form any more than has already been done. Anyone familiar with the history of a lease and the proper recording of it will be able to see the benefit derived from installing such a system as this one. The most important factor contained in it is its brevity. Although a small sheet it carries the complete information of the entire transaction. It is very easy to refer to this form and ascertain any information desired by the head of any department.

Road Serving Irma Field Declared Common Carrier

El Dorado, Ark., April 19.—The short line railroad, owned by the Mansfield Hardwood Lumber Company of Shreveport, which operates between the Irma oil field, in Nevada County, and the trunk line of the Missouri Pacific at Reeder, Ark., and affords the sole outlet for oil produced in that district, was declared a common carrier by a decision on April 15 by the Arkansas Railroad Commission in the case of the Keystone Oil Company et al versus the lumber company. As a common carrier, this line is subject to the regulations of the public service commission, effective 30 days after the issuance of the order.

The effect of this decision is to eliminate a tariff of 15 cents per barrel formerly collected for the transportation of crude oil from the Irma field to the Missouri Pacific lines at Reeder. This will result in a direct saving to producers, as there is no posted price on the heavy oil produced in Nevada County. Sales are made by direct negotiation with refiners, at prices quoted f.o.b. Gulf Coast ports. Irma crude competes with "A" grade Gulf Coastal oils in the manufacture of lubricants.

The conservation division of the Arkansas Railroad Commission has promulgated the following regulation designed to protect the shallow pay zone in the Smackover deep sand area, and to minimize the danger from blow-outs and craters:

"Amendment to rule 43, order No. 284:

"The following schedule shall be followed in setting and cementing to the 2360-foot (below sea level) sand in the Smackover district and east of north and south line passing through the center of section 12-16-16. In setting 6-inch to 6⅝-inch casing inside 9⅞-inch hole a minimum of 250 sacks of cement must be used; 6-inch to 6⅝-inch in 8½-inch to 9-inch hole, a minimum of 200 sacks; 6-inch to 6¾-inch in 7⅞-inch to 8-inch hole, a minimum of 125 sacks; 8-inch to 8¼-inch in 10¼-inch to 11-inch hole, a minimum of 275 sacks. Where 5 3/16-inch casing is set in 6¼-inch hole or where 4½-inch is set in 6-inch to 6¼-inch hole 30 sacks of cement must be used to every 100 feet of open hole or in the proportion of one sack of cement to each three and one-third feet of hole.

"On all wells drilled in the above named area, surface casing shall be set and cemented with a minimum of 50 sacks of cement at a minimum depth of approximately 300 feet."

Ninde Goes With Ward Chemical Co. at Tulsa

Tulsa, Okla., April 20.—F. E. Ninde, formerly purchasing agent of the H. F. Wilcox Oil & Gas Company of Tulsa, has become associated with the Ward Chemical Company and will act as district manager in charge of the company's Tulsa offices. William V. Ward is president of the company which has offices at 226 Atco Building here.

The Ward Chemical Company manufactures boiler scale remover and water treating chemicals and have built up an extensive business in the oil country as well as in other industrial lines. The company's products are sold through supply stores.

Tulsa Purchasing Agents Hold Election of Officers

Tulsa, Okla., April 20.—Fred W. Robertson, purchasing agent for the Skelly Oil Company was elected president of the Purchasing Agents Association of Tulsa at its annual election last week. E. A. Cook, of the Sun Company was elected as first vice-president; J. A. Edwards of the Oklahoma Power Company was elected second vice president and V. C. Fuller of the Gypsy Oil Company was made national director for the Tulsa association. O. V. Borden was re-elected for the fifth consecutive time to fill the office of secretary-treasurer.

Los Angeles, Calif., April 18.—Derrick has been erected and drilling will start next week on a wildcat located two miles south of Santa Ana on the Irvine ranch. The well is to be known as H. S. Gale's Irvine Ranch 1 and is about 2 miles northeast of the wildcat now drilling by the Standard on the same ranch. Fifteen hundred acres have been blocked up for the test.

L. J. King, vice president and general manager of production department in southern district of California for the Associated-Pacific Oil Companies, headquarters at Los Angeles, has returned to his office after several weeks of illness.

Fred Shoup, sales manager for the Associated Oil Company, headquarters at Los Angeles, spent most of last week visiting the Associated offices at San Francisco.

Magnolia Shipments Slump Again in March

Dallas, Texas, April 13.—Another substantial decline in daily average crude runs from various fields in Oklahoma, Texas, Louisiana, Arkansas and Kansas was experienced by Magnolia Petroleum Company during March, and the low mark reached on crude runs during this month temporarily removes Magnolia from the ranks of the major crude buyers in the Mid-Continent District. Crude runs, representing production and outside purchases of Magnolia in the five states, averaged 53,265 barrels daily during March, or a decrease of 10,950 barrels when compared to the daily average maintained during the month previous, while last November the daily average amounted to 75,044 barrels. Since Magnolia's production in the above five states ranges in the neighborhood of 40,000 barrels daily, the outside crude purchases made by the company during March are almost negligible.

The decline in crude runs since last November is due to slump in purchases from other producers, as Magnolia's production has been maintained around the present level for months. The bulk of this decline can be traced to the loss of connections with the passing of the flush period in the Wewoka-Cromwell district, where Magnolia purchased and produced 568,240 barrels last November, as compared to 194,173 barrels last month. The failure of the United North & South Oil Company, major producer in the Luling field, located in Southwest Texas, to renew after the expiration of its last crude sale contract with Magnolia early last March resulted in Magnolia's daily average runs from this district dropping from 10,130 barrels in Februray to 3,503 barrels in March. Magnolia has been buying from this producer at a fixed price, lump amounts of crude ranging from 500,000 to 1,000,000 barrels for delivery over a period, and shipments made via eight-inch welded line direct to Beaumont. Atlantic Coast refiners, Southern Pacific Railroad and others outbid Magnolia for the Luling crude, which is now moving out in tank cars on contract for specified amounts at fixed prices.

The Electra-Burkburnett district in North Texas was Magnolia's most important crude source during March with 217,217 barrels, while Healdton, Oklahoma, was second in crude runs with 203,219 barrels reported for the month. Magnolia registered 101,613 barrels in the Burbank, Oklahoma, district during March which represents deliveries received from accumulated production and purchases in Kansas via the Oklahoma Pipe Line Company. The sharp drop in runs from the Wortham-Mexia district in East Central Texas during March was due to the passing of flush production on Magnolia's N. B. Boyd lease in the Wortham field.

Heavy inroads have been made in Magnolia's crude stocks in Oklahoma and Kansas since building up a peak for the past year of 9,574,125 barrels in November, and stocks on hand at the close of March in these two states amounted to 8,332,370 barrels, or a reduction of 1,241,775 barrels in four months. Withdrawals from Oklahoma-Kansas stocks since the first of the year by Magnolia has averaged 339,000 barrels monthly. This includes Healdton crude that has been held in steel tankage in Southern Oklahoma for ten years. Crude stocks in North and Central West Texas tank farms have not been tapped as heavily, as 2,540,506 barrels were on hand at the close of March as compared to 2,760,730 barrels of stocks on the first of the year.

Magnolia's continued decline in crude runs from the high gravity oil producing areas in the Mid-Continent District does not indicate the policy of the company regarding the purchase of light oils at present prices, as new connections are being encouraged in fields served by its system. The absence of any appreciable quantity of new production, or flush oil in the fields served by Magnolia's system since the passing of the Cromwell heavy development period in November has played an important part in preventing the loss in runs being offset elsewhere. The working off of old crude stocks at present favorable prices, while other major buyers are hardly equalizing crude shipments with runs, places Magnolia in a most desirable position in the event Mid-Continent crude prices take a downward course in the near future, but the return of a strong crude demand and higher prices as summer approaches would place the company without an adequate supply of crude to fill the requirements of its three refineries in operation at Beaumont, Fort Worth and Corsicana.

Evidence of Magnolia's interest in new connections in high gravity fields is shown by the construction of a pipe line system to the Wilmot-Wilson and Harmel fields in Archer County, Texas, where some production is held and new connections encouraged. The first runs from this county were made during March by Magnolia. About 20 miles of six-inch line is being rushed to completion from Magnolia's empty steel storage near Luling to the new shallow high gravity field near Lytton Springs in Caldwell County. Plans are to start purchasing oil in the field immediately, and store same in small tankage until the line can be completed about May 1. This oil tests about 38 gravity, and will be kept separate from the Luling low grade crude, with shipments to the Coast via Magnolia's eight-inch line at intervals.

Water shipments of refined oils (gasoline, kerosene and lubes) made by Magnolia during March increased nearly thirteen million gallons, as compared to movements reported during the month previous. Fuel and crude oils also registered a slight gain. Water shipments made from Beaumont terminals to the Atlantic Coast and foreign countries by Magnolia for the past six months follows:

	Fuel oil (Gals.)	Refined oils (Gals.)	Crude (Barrels)
October	11,726,891	42,803,944	395,992
November	15,184,114	45,663,926	225,514
December	15,323,047	41,845,684	77,097
January	28,317,913	19,598,858	75,871
February	15,449,742	18,984,883	None
March	19,426,944	32,355,649	121,145

Magnolia's crude runs by fields for February and March follows:

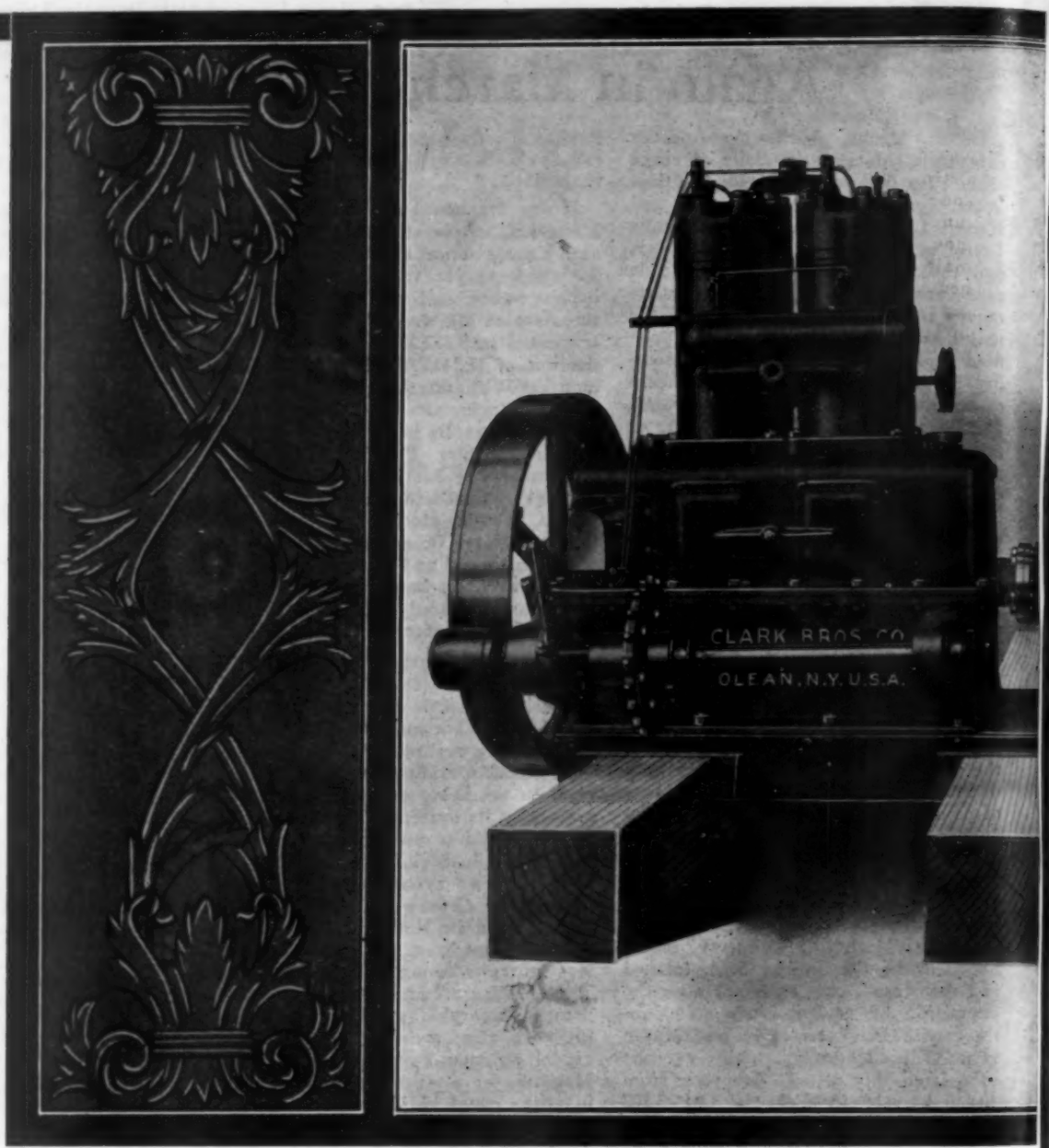
	February totals in barrels	March totals in barrels
Healdton	188,368	203,219
Wewoka-Cromwell	235,156	194,173
Cushing	120,465	143,726
Burbank	None	101,613
Hewitt-Graham	99,750	98,882
Duncan	55,934	61,215
Yale	144,212	53,184
Augusta	29,684	35,532
Cement	24,113	23,891
Walters-Beaver Creek	8,972	9,112
Bristow	355	362
Totals for Okla. and Kan.	907.009	924.909
Electra-Burkburnett	203,015	217,217
Luling	283,644	108,582
Mexia-Wortham	157,517	98,237
Mirando	55,204	64,304
Desdemona-Comanche	35,253	37,983
Stephens County	25,299	26,134
Corsicana-Powell	25,002	26,043
Ranger-Olden	20 423	23,618
Archer County	None	21,486
Corsicana (heavy)	11,031	11,298
Petrolia-Clay County	4,545	5,218
Thrall-Williamson County	1,111	1,651
Coleman County	506	641
Totals for Texas	822,550	642,412
Totals for Arkansas	43,531	57,858
Totals for Louisiana	24,909	26,047
Grand total for 5 states	1,797,999	1,651,226

Clark Machine Company Builds Addition to Factory

Wichita Falls, Texas, April 23.—The Clark Machine Company has recently built another addition to its factory here and has also enlarged the shop so as to provide room for additional machinery that is being installed. The new building is of modern construction and design and is 50 x 25 feet.

The enlargement of working space and installation of additional machinery has been necessitated by the increased business of the company, according to H. A. Clark.

D. F. Connolly, president of the D. F. Connolly Agency, Inc., has returned to company headquarters in Tulsa after a business trip in the North and East where he visited at Buffalo, New York, and other points.



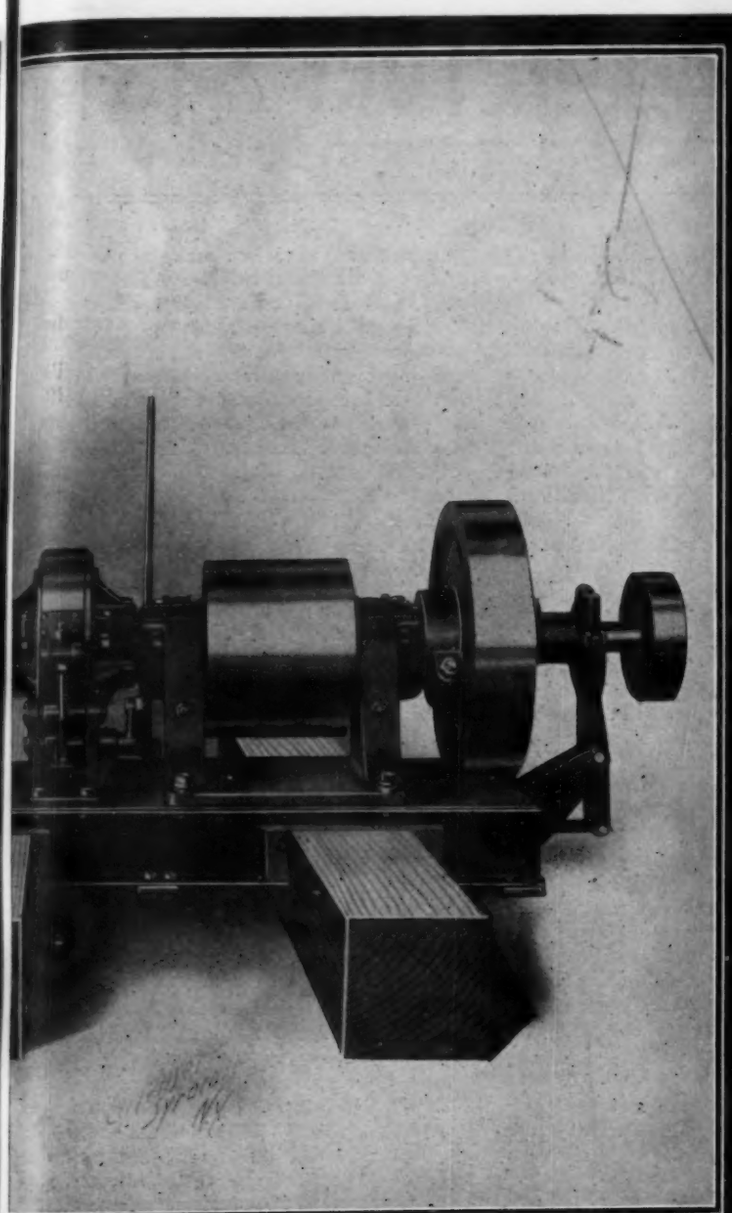
WEST TEXAS HITS T

Three CLARK DRILLING ENGINES introduced at about the same time, converted the whole of Western Texas to the possibilities of drilling with these remarkably economical engines.

More than 20 Clark Engines are now used in and around the Big Lake district. During the past week orders have been received for four additional engines.

DISTRIBUTORS
Mid-Continent
GAS ENGINEERING CO.,
125 W. First Street
TULSA, OKLAHOMA

CLARK GA



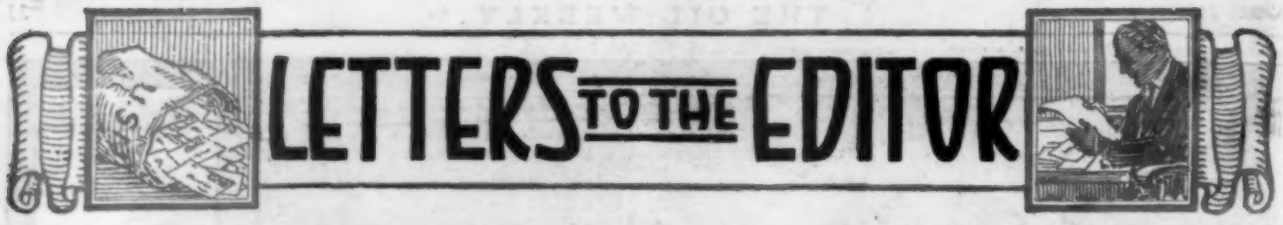
THE SAWDUST TRAIL

The list of Clark Drilling Engine users in Western Texas includes the Trans-Pecos Oil Company, Gulf Production Company, Eastland Oil Company, Pennsylvania-Texas Oil Company, Union Oil Company, James Wheat (contractor), J. S. Cosden and J. F. Quimby (contractor).

Clark Drilling Engines, with gasoline attachment, are saving some operators more than $50.00 per day in the West Texas fields on account of water and fuel conditions.

DISTRIBUTORS
Pacific Coast
SMITH, BOOTH USHER COMPANY
228 S. Central Ave., Los Angeles
50 Fremont St., San Francisco

S ENGINES



The Tale of Three Letters

Houston, Texas, April 4, 1925.

Mr. Lew Suverkrop,
Taft, Calif.

Dear Mr. Suverkrop:

There are four reasons men give when they ask for a raise. These are the four phrases that employers hear again and again:

1. "I have been here a year (or more) and have had no increase."
2. "My work is satisfactory."
3. "It costs more to live. I must have more money."
4. "The business is making more; and you can afford to pay more."

Why do some men receive large promotions without asking, while others must argue for tiny salary increases? Day after day, in every kind of business, the phrases quoted above are used by men as reasons why their remuneration should be increased. With a kind of pathetic faith they quote them; and frequently their employers —rather than incur the expense of employing a new man—are moved by them to grant small increases.

Meantime, the great prizes of business go unasked to other men—often no older; often apparently no more hard working. And the men who ask for increases and receive pittances, look and wonder and feel aggrieved. Of course, the explanation lies in this fundamental truth: The man who by training fits himself to produce more will inevitably receive more. To keep ahead of the game, or even up with it, these days requires more than the slow but sure type of progress that brings only the advancement earned by conscientious service. It is not enough that a man be "willing"; he must also be "able".

To better prepare oil men to handle any problems that may arise, The OIL WEEKLY publishes from week to week semi-technical articles on oil production. Many men who are reading these articles are able to profit from them immediately in their work; others are storing up knowledge to be used in the job ahead. So whether you are at the top of the ladder, the bottom or somewhere in between, you can profit from reading The OIL WEEKLY. And the cost is only $1.00 for a whole year—52 issues. The enclosed order blank is for your convenience—but don't delay—use it NOW.

Cordially yours,
R. L. Dudley,
Manager The OIL WEEKLY.

Box 1945,
Taft, California,
April 10th, 1925.

Dear Dud:

(I like that. Euphonious. I think the reason we used to use so much Budweiser in the old days was because it was pretty easy when one got well along to say, "Bottle o' Bud". It was euphonious, like the way I greet you.)

Yours of the 4th to hand and contents noted and I take my pen in both hands to reply.

Like it says somewhere in Shakespeare, I get your drift.

In fact I get it so well, you pretty near had me crying out of sympathy for you, by the time I had read a while. I could hardly stand finishing your letter, I felt that bad.

I understand how it is, because my dear old daddy was an editor on the "American Machinist" for about 15 years. Having the same trouble in my own family I sure could feel for you. Same viewpoint, in fact.

So instead of doing just what you asked, I am sending you TWO dollars, coin of the realm; and here's what I want you to do. I want my personal copy of The OIL WEEKLY sent to me, like you used to do before I got interested in these letters you've been sending me since my sub. ran out. That'll cost a dollar.

Now Dud, here's what I want you to do with the other dollar. I want you to just keep it for yourself. Needn't say anything about it to anyone. Just put it in your pocket.

Of course, being honest like I am and every one else in the oil business, you might not want to do that. In that case, you can have 'em make the sub. for two years instead of one.

And if I have not made my pile by that time I'll sign up again.

But even if I have made my pile I'll probably sign up anyway because I'll want to keep in touch with the old game, and The OIL WEEKLY is the best medium I know of to do it by.

Yours truly,
Lew Suverkrop,

R. L. Dudley, Esq.,
The OIL WEEKLY,
Houston, Texas.

April 14th, 1925.

Mr. Lew Suverkrop,
Box 1945,
Taft, Calif.

Dear Lew:

Your euphonious epistle duly received.

If the circulation department hadn't gotten to the letter before I did, I would have had a chance at that dollar.

Then too, you gummed up the works when you wrote on the check, "Two year's subscription," and made it out to The OIL WEEKLY.

I have a faint suspicion, Lew, that you were kidding me in your letter.

So we are going ahead and entering your subscription for two years, which means that for the next twenty-four months, you will be one of the best posted oil men in the United States. If you aren't Chairman of the Board of your company by that time, it probably will require only a small additional investment in The OIL WEEKLY to push you to that dizzy height.

As Shakespeare so recently and ably said in the Merchant of Venice, when the poor gink had just signed the bond, "Them as reads learns".

We have nearly 11,000 Solomons scattered from the far east to the near west, all applying the above Shakespearien doctrine.

Yours,
Dud.

WANTED:

Experienced cable tool or combination driller to occupy position as assistant superintendent of drilling and production in Poland. Must have had some experience as superintendent in this country. Position not available unless applicant is willing to remain at employer's option five or more years. Married man, not under 35 years, without children, preferred. Ability to speak German would be great advantage. Make application by letter only giving full particulars of past experience, present employment, references and salary expected. Vacuum Oil Company, Room 1701, 61 Broadway, New York, N. Y.

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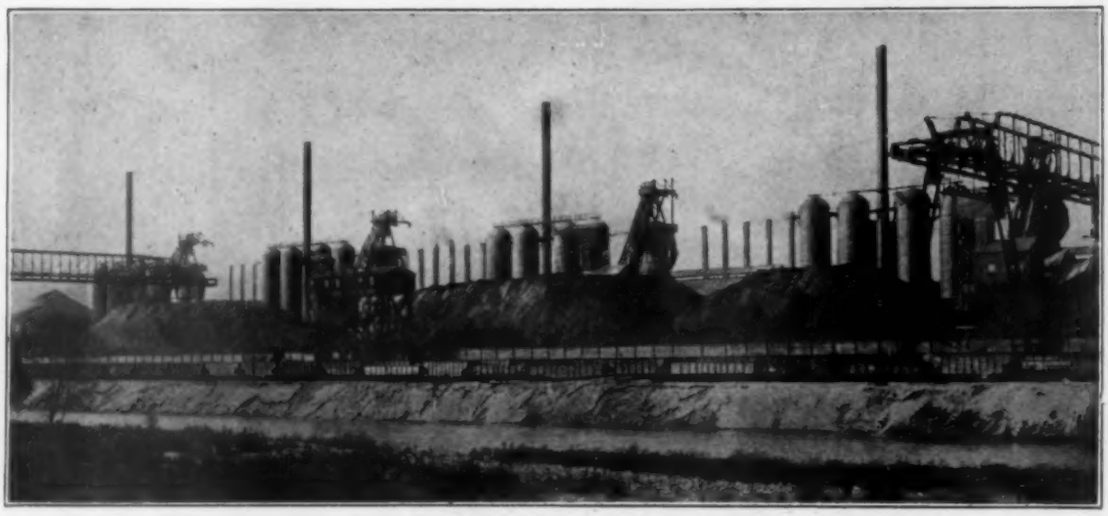

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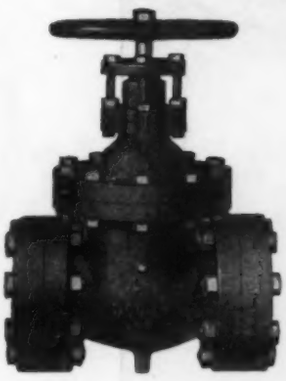

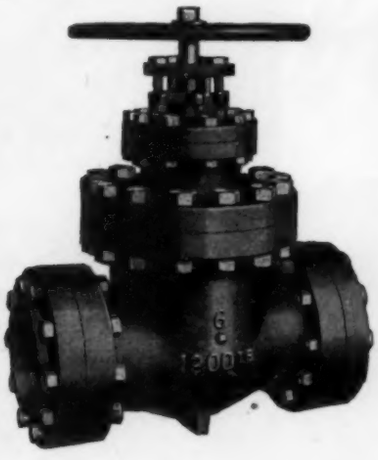

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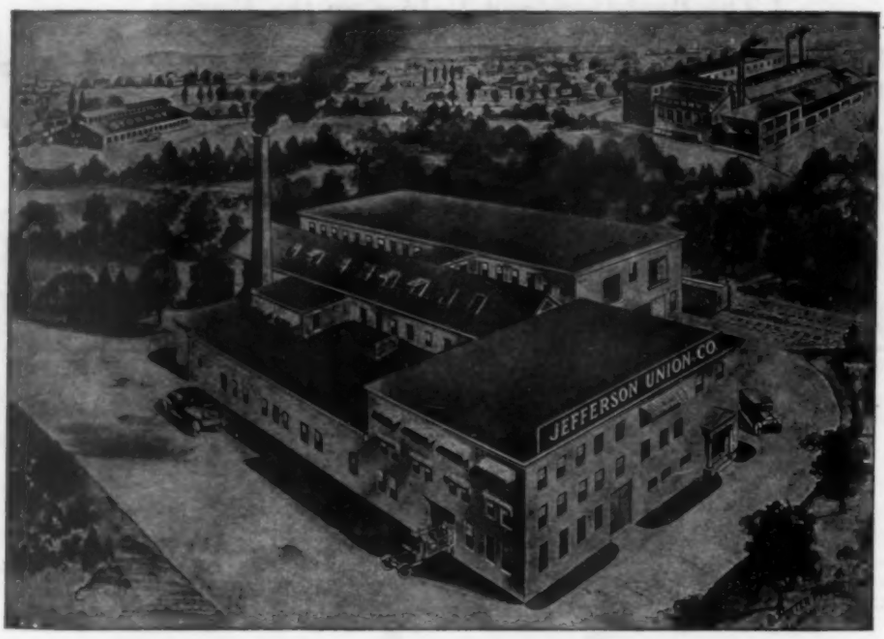

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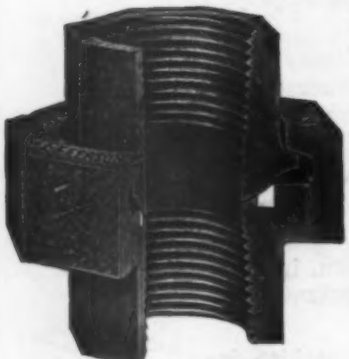

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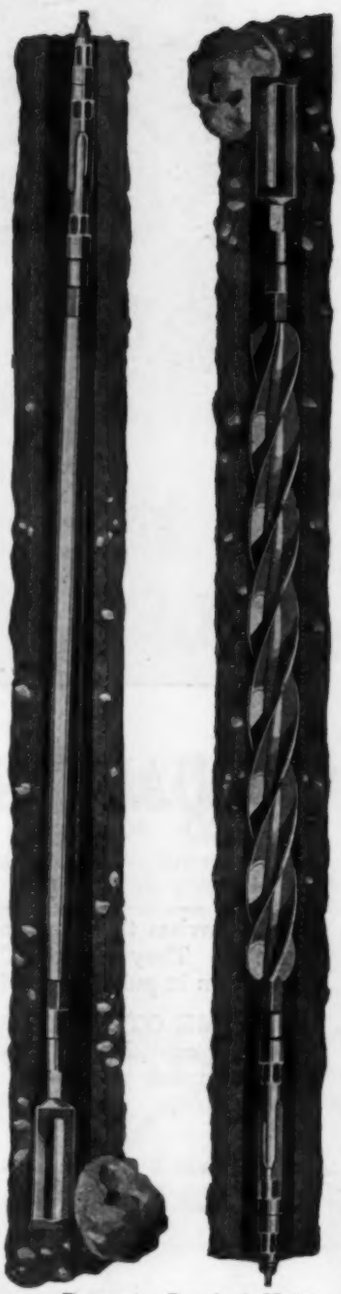

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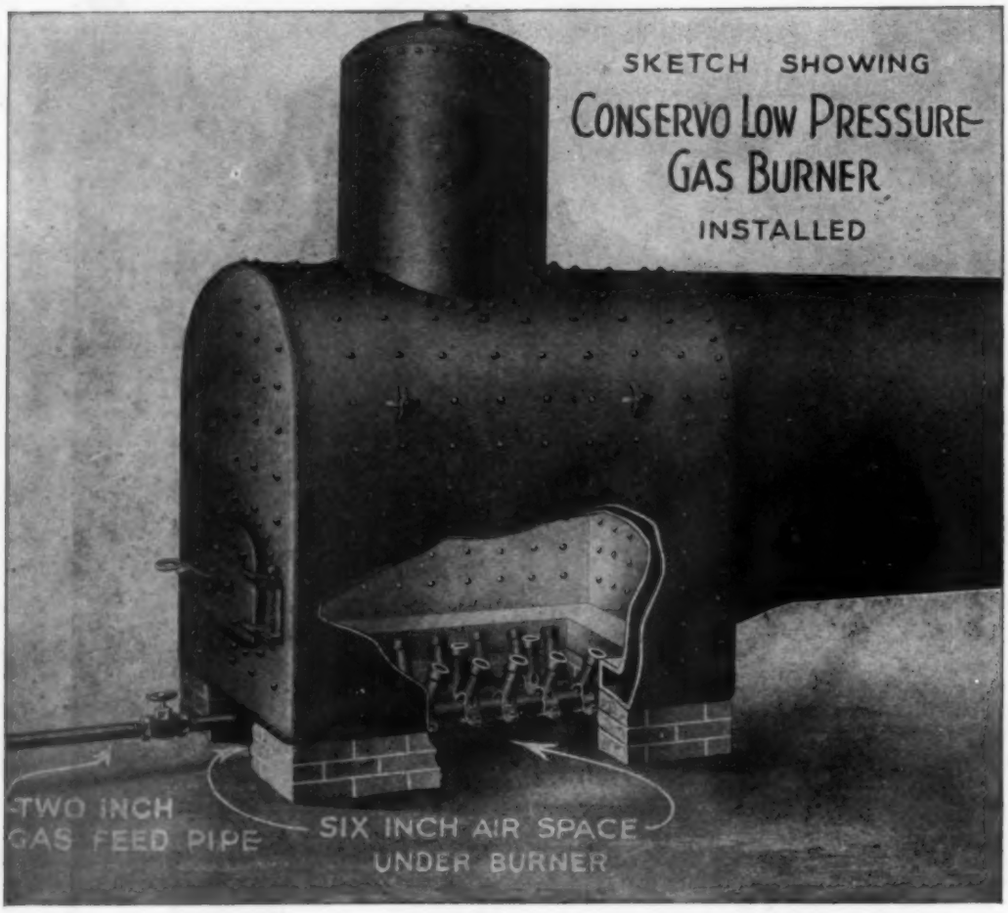

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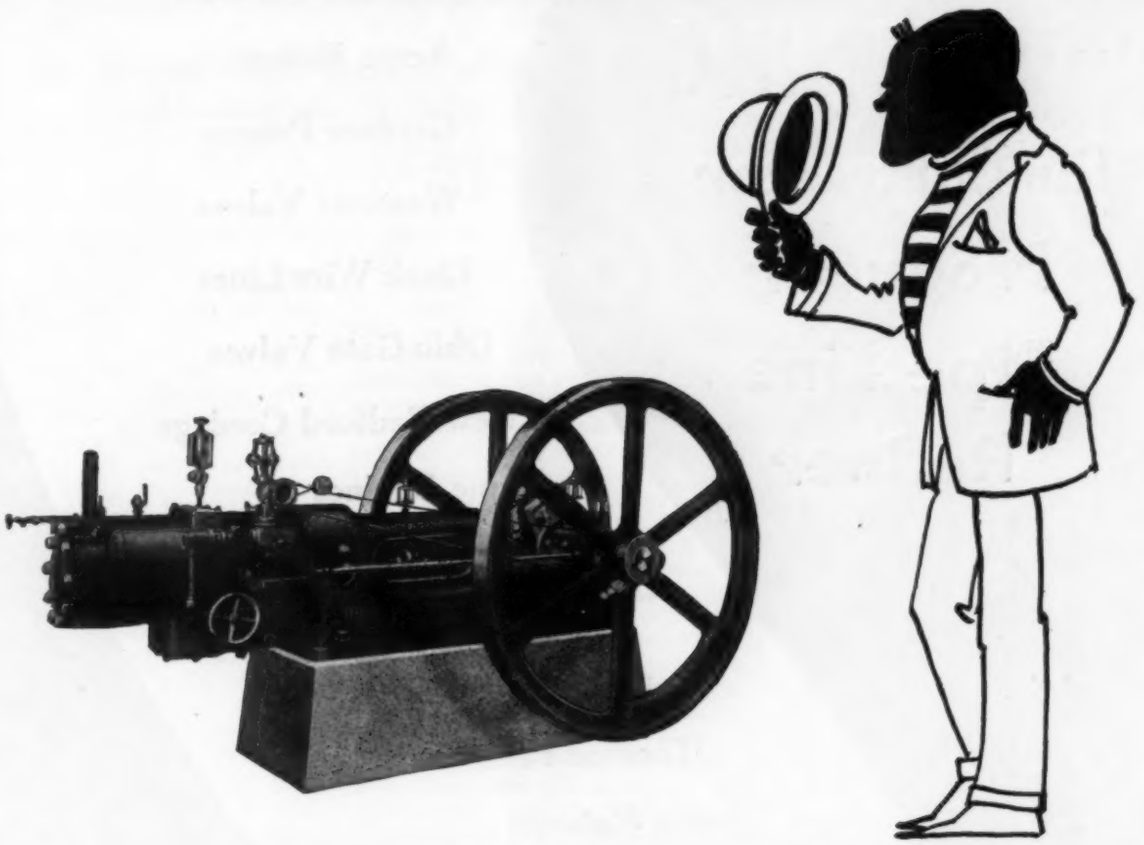

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Increasing Production By Increasing Diameter of Wells

An address before the annual meeting of the American Institute of Mining and Metallurgical Engineers in New York

*By Lester C. Uren**
Berkeley, California

(The accompanying article concludes the discussion started in the last issue of The OIL WEEKLY by Mr. Uren and deals with filling the cavity in cases where caving is likely to result with the removal of the hydrostatic head in the well.)

SOMETIMES, in the case of a partly cemented oil sand, the cavity thus formed about the well will remain open, the walls displaying little or no tendency to cave. In such cases, the well may be placed on production as soon as the cavity has been cleared of accumulated detrital material. When dealing with unconsolidated oil sands, however, which readily cave as soon as the hydrostatic head within the well is removed, it will be necessary to fill the cavity, with a porous sustaining medium before the oil in the well has been bailed or pumped out. For this purpose, carefully sized gravel or crushed rock fragments about ¼ inch or ⅛-inch in diameter may be used. Slichter[1] has shown that a fluid will flow about 2500 times as fast through fine gravel about 1-5 inch in diameter as it does through very fine sand (about 150 mesh), even though the two media have the same percentage porosity; hence the oil will meet with but little resistance when moving through the well cavity to the tubing.

[1]Op. cit., 140.

The equipment used to excavate the cavity could subsequently be used to place the gravel, with some additional features in the surface equipment. In Fig 9, I and J are cylindrical gravel containers supported above the stuffing box casinghead K, and connected with the pipe L through which oil is pumped into the space between the pipes C and D. The two containers are supported on rollers so that they may be revolved with the pipe C when manipulating the jet. The pumps and circulating fluid are operated in the same manner as described for the formation of the cavity, except that the outlet pipe D is closed and the oil flows back to the surface between the outer pipe C and it conductor casing A. However, a lower pump pressure should be used when pumping gravel than when excavating so as to avoid loosening additional sand, which would settle between the interstices of the gravel and reduce its effective porosity.

The gravel containers I and J are equipped with suitable valves M and N where they make connection with pipe L; other valves O, P are placed at their upper ends. With the upper valves closed and the lower valves open, the interior of the gravel containers may be maintained under the full pump pressure and in direct connection with the oil-circulating system. Gravel of suitable size to pass freely through the valves, and between pipes C and D and through nozzle G, is charged into the containers I, J, the upper valves O and P are closed, and either valve M or N is opened. With the pumps working under moderate pressure and with oil flowing down between the pipes C, D, out into the well cavity through the nozzle G, and back to the surface between the outer pipe C and the conductor casing A, gravel enters the circulating system, is swept down through the annuar space between the pipes C, D, through the nozzle G, and is deposited in the well cavity. If the volume of the circulating fluid is so adjusted that the oil flowing back to the surface has not sufficient velocity to lift the gravel, it will accumulate in the bottom of the cavity until the latter is filled. By securing a proper ascending velocity of the oil during its return to the surface between the pipes C and A, it will, through its sorting action, carry to the surface any sand, clay, etc., that may be dislodged from the walls of the cavity during deposition of the gravel, leaving the latter free of such material. If the sand tends to cave during deposition of the gravel, a second pump may force a stream of oil down to the bottom of the well through the inner pipe D. If the velocity of this stream is carefully adjusted, it will, on circulating up through the gravel during depostion, carry the loose sand to the surface, leaving the interstices of the deposited gravel free of sand.

When placing the gravel, the jet is first lowered to a point near the bottom of the cavity and then raised slowly and turned back and forth as the gravel accumulates. The gravel containers I, J are connected with the circulating system alternately, one being filled while the other is feeding its material into the well. They may be readily refilled from a loading apron, which is filled with gravel on the derrick floor, hoisted into the derrick above the containers, and connected with the valve of the container to be filled.

In some cases, it may be feasible to fill the well cavity by gravity, merely dumping gravel into the inner pipe D, raising both pipes C and D as the gravel accumulates; but in view of the difficulty of settling a large quantity of gravel to the bottom of a deep well through a tube only a few inches in diameter, and filled with viscous oil, placing the gravel with the pump pressure may be preferable. Furthermore, the angle of repose of the gravel might not permit the complete filling of a shallow cavity of large diameter by gravity. If the gravel is placed by gravity, occasional tamping with the cable drilling tools during deposition will aid in working it out to the walls of the cavity.

After the well cavity is completely filled, the pipes C and D are withdrawn and the screen pipe A is lowered to the bottom. Some of the gravel may cave into and partly fill the hole left by withdrawing the pipes C, D, but this material will be readily pushed aside by the shoe of screen pipe A as it is lowered to the bottom of the cavity. Any gravel remaining with pipe A after it is placed on bottom may be bailed out with a sand pump. The permanent pumping device can now be lowered within the screen pipe and the well placed on production.

Supplementary Methods for Special Cases

Should it be found impossible to secure circulation of oil back of the surface, because the sands exposed within the well absorb oil more rapidly than it can be pumped in, other means of removing the detrital material must be adopted. It may be feasible to remove the detached sand by bailing, or by a compressed-air lift or ejector. Arrangements for bailing are shown in Fig. 10, which shows the application of two jets placed 180 degree apart on the pipe C. Oil is pumped down between pipes C and D, as before, and forced through the jets H against the oil sand, gradually eroding it away. It is assumed that oil accumulates in the well until it attains a sufficient head to cause the oil sand to absorb it as rapidly as it is pumped in. It is thought that this will rarely happen, but it may result in attempting to form

*Associate Professor of Petroleum Engineering, University of California. Copyright, 1924, by the American Institute of Mining and Metallurgical Engineers, Inc.

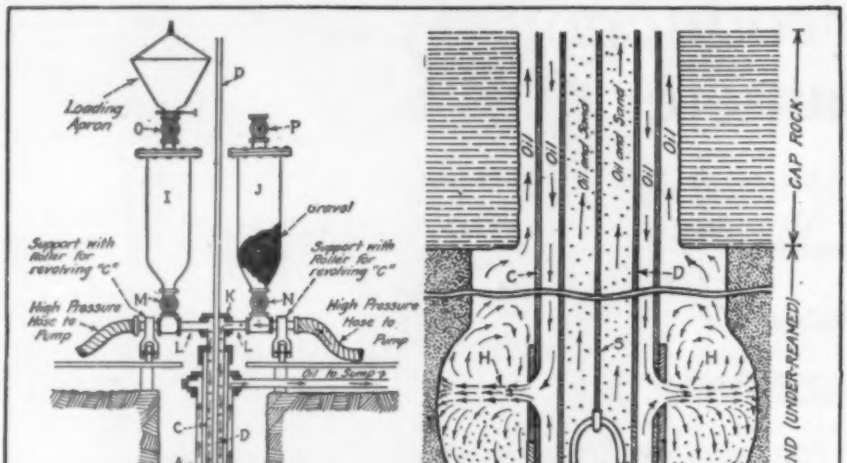


FIG. 9. FIG. 10.

FIG. 9.—ARRANGEMENTS FOR FILLING A CAVITY ABOUT A WELL WITH GRAVEL BY HYDRAULIC ACTION OF A JET OF OIL.

FIG. 10.—METHOD OF FORMING A CAVITY ABOUT A WELL BY HYDRAULIC ACTION OF JETS OF OIL; DETRITAL MATERIAL REMOVED BY CIRCULATING OR BAILING.

cavities in partly exhausted oil sands, the circulating oil entering the oil sand to fill voids left by oil previously extracted. The sand loosened by the jet sinks to the bottom of the well and is removed by the bailer R, which is operated through the inner pipe D on sand line S. The bailer must be operated continuously and lowered to the bottom for its load. Pipe D should with this method, be as large as the diameter of the well will permit and the bailer R should be as long as possible in order to secure maximum capacity.

Under certain conditions, it will be feasible to remove accumulated oil sand from the well with a compressed-air lift or ejector. The ability of the air lift to handle large quantities of fluid and suspended sand in oil wells has been demonstrated in many instances.[5] A reasonable submergence, preferably 30 per cent. or more of the total lift, must be secured for efficient operation; that is, the oil used in operating the jet must accumulate in the well to some such depth above bottom. If the well has been drilled to a sufficient depth below the oil sand to secure the necessary submergence, it might be feasible, with the aid of the air lift, to maintain a fluid level in the well below the position of the oil jet, so that the latter can apply its full force directly against the oil sand without, having its energy partly absorbed by the surrounding fluid. The effective force and range of the jet will be greatly increased in such a case but conditions favorable for such a method will be found only in comparatively shallow wells. The maximum air pressure available with two-stage compressors (ordinarily about 500 lb. per sq. in.) will limit the depth of operations to about 3000 feet, assuming a submergence of about 1100 feet.

Of the three methods proposed for removing the oil and sand from the well, the first method is the most practical and easiest to apply. The well equipment may be readily installed and the method presents no unusual problems. If the well has been drilled by the rotary method, the oil pump used to provide pressure, the oil sump and sand-settling trough may be those used in circulating mud fluid during the drilling of the well. The swinging spider, special casingheads and gravel containers may be readliy assembled and moved from well to well and rigged in a short time. If circulation cannot be established, because of rapid absorption of the circulating oil by the oil-bearing stratum, the bailer method or the air-lift method may be employed. The bailer method, however, will have but limited capacity for sand and fluid; and the air lift will require costly compressor equipment and air transmission facilities not ordinarily available on oil-producing properties.

The most advantageous method of applying the jet and of filling the cavity will vary with different wells and a careful study of the conditions to be met should be made in each individual case. The time at which the work should be done will also be an important consideration. If gas pressure is high during the early life of the well, the difficulty of keeping the well under control will make it advisable to defer excavation of the cavity until the pressure has subsided. On the other hand, if the well has been producing for some time, it may be difficult or impossible to loosen the perforated "oil string" in order to get access to the sand. In such a case, it will be necessary to "side track" the lower part of the oil string and redrill the well through the productive stratum. A side-tracked column of casing may interfere with the action of the jet to some extent but need not necessarily prevent a satisfactory result. Application of the oil jet against the perforations with occasional swabbing, or circulation under the shoe and through the perforations with a wash pipe and plug, will aid in loosening a frozen oil string.

Possible Difficulties in Application of Proposed Process

One or more uncertain points have probably suggested themselves to the reader in connection with the procedure outlined above. How will the oil sand react under the influence of the hydraulic jet? Will the force of the jet, partly spent in overcoming resistance of the well fluid, be inadequate for the purpose and fail to secure the desired range of action? Will the jet loosen the sand so rapidly that the lower portion of the well and ejector tube will become "sanded up?" Will the cavity cave as rapidly as formed; that is, will the hydraulic head maintained within the well be ineffective in preventing caving before the cavity can be filled with gravel? The author believes that, with varying types of oil sand, any one of these occurrences might prevent successful accomplishment of the desired result. If the oil-bearing stratum is a hard, firmly cemented sandstone, the radius of action of the jet will probably be small. If the sand is unconsolidated and uninfluenced by cementation, it may display a tendency to cave during the formation of the cavity; and continued caving with possible subsidence of the cap rock may lead to serious consequences. Granting that such may be the case, with extremes in the degree of cementation of the sand, there are still intermediate types or partly cemented oil sands with firm cap rocks, in which the process would be successful. In such cases satisfactory progress of the work would depend merely on good engineering and skill in con-

[5] L. C. Uren: "Petroleum Production Engineering," 370-377; McGraw-Hill Book Co., New York, 1924.

trol and manipulation of the equipment. It is possible that even the more difficult types of oil sand can be successfully handled after the mechanical technique of the process has been perfected.

The effective range of action of the hydraulic jet in excavating a cavity about a well will be influenced, to some extent, by the depth at which it is applied. The pressure impressed on the circulating oil and transmitted thereby to the jet will be partly consumed in pipe friction during its circuit through the well; it must also furnish the lifting force to remove the sand detached from the walls to the surface. The net pressure, after making these deductions, will determine the effective range of action of the jet in the work of excavation. The jet will probably lose all semblance of definite form within a few feet of the orifice by which it is formed, because of turbulence induced by the surrounding fluid; but the momentum of the stream will produce a considerable erosional effect at a much greater distance.

A somewhat difficult problem in design is the determination of the desirable diameter for the jet orifice, in terms of the volumetric capacity of the pump when operating at the maximum available pressure. If two slush pumps are available, as will be the case with a rotary drilled well, both may be used, arranged to operate in parallel in order to increase the volume of flow. Care must also be taken in selecting the sizes of tubing to be used. The annular space between the two tubes must be sufficient to pass the desired volume of descending fluid without undue pressure loss, and the inner tube must be of such size that an adequate ascending velocity for the sand-ladened oil will be assured.

Operation of Proposed Process on an Experimental Scale

In an effort to find an answer to some of these questions, the author performed an experiment in the glass-walled box (Figs. 5 and 11). The box was filled to a depth of 12 inches with a carefully screened beach sand of +50, —60 mesh. The sand was then saturated with a California crude of about 19° Be. gravity. Two wells were excavated in the sand, one of which was 0.7 inch in diameter and cased with a brass tube and screen similar to that illustrated in Fig 6. The second well was made 1.7 inch in diameter. Though left uncased, it displayed but little tendency to cave during the entire progress of the experiment. Both "wells" were filled with oil to the surface of the sand, as the sand was saturated with oil and maintained so by direct connection with oil reservoirs at each end of the box. In the larger, uncased well, two small glass tubes were placed: one ⅛ inch in diameter with a short nozzle bent at right angles at the lower end, through

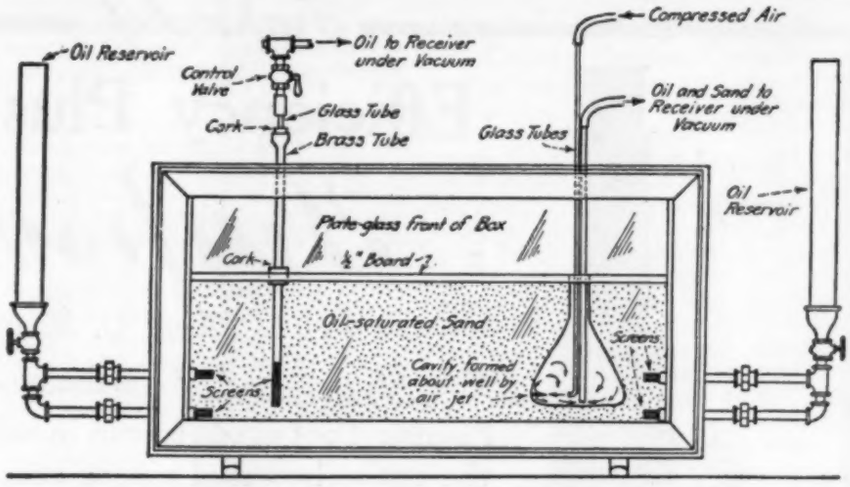


Fig. 11—Manner of conducting laboratory tests in glass-walled box containing unconsolidated, oil-saturated sand; at right, method of forming a cavity with aid of a compressed-air jet; at left, arrangements for pumping under vacuum.

which compressed air under 2 or 3 lbs. pressure was forced; and the other a straight tube about 0.3 inch inside diameter, which was connected at its upper end, by rubber tubing through an oil receiver, to a vacuum pump. The compressed air served to loosen the sand as would an oil jet, while the vacuum pump removed oil from the hole, carrying the suspended sand detached by the jet. The miniature jet was maintained at a depth of 9 inches below the sand surface and was slowly revolved so that it directed its force successively in all directions in its horizontal plane. The sand about the jet was rapidly eroded away, but was readily extracted and prevented from accumulating in the well by the vacuum pump, oil flowing into the well from the sand to provide the necessary suspending medium. Eventually the cavity was extended out to the glass side of the box, through which its form could be studied; Fig. 11 illustrates the result. Though the sand "roof" overhung the cavity at a considerable angle from the vertical, it displayed no tendency to cave and the pear-shaped cavity was maintained without any support other than the oil in the hole. After excavating the cavity, a brass tube 0.7 inches in diameter, similar to that illustrated in Fig. 6, equipped with a cylindrical screen at its lower end. was inserted in the cavity to a depth of 9 inches below the sand surface. The space about the screen at its lower end, was inserted in larged cavity was then filled with angular fragments of crushed rock of about 6 mesh size. This material was simply poured in about the brass tube from the top.

On completion of the foregoing, there were two brass tubes equipped with screens of identical proportions embedded in the oil saturated sand to the same depth. In one case, however, the sand was in immediate contact with the screened tube, while in the other case the tube was surrounded by a pear-shaped cavity filled with crushed rock, the cavity being about 4 inches long and 4 inches in diameter at its lower end. Pumping tests were next made to determine the comparative productivity of the two "wells," using a vacuum pump to suck out the oil from each of the two wells alternately, as in the previous experiment. The 0.7 inch diameter well, in which the sand was directly in contact with the screen tube, produced at an average rate of 52 c.c. per minute, while the well surrounded by the rock-filled cavity produced at the rate of 106 c.c. per minute, thus demonstrating conclusively the greater capacity of the enlarged well.

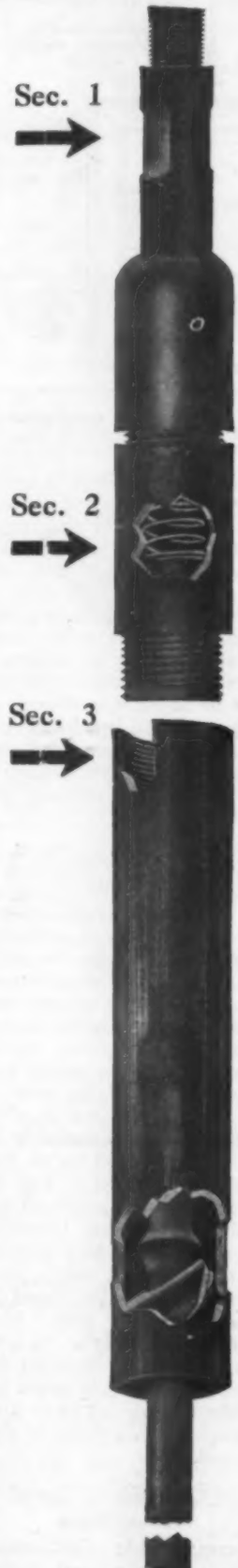
Location of Well Cavity in Thick Oil Sands

In the application of the process in thick oil sands, it would probably not be necessary to enlarge the well for the full thickness of the oil-producing stratum. Because of the rapid depression of the fluid level in the immediate vicinity of the well, only the lower portion of the oil sand would be productive of oil; and if the well cavity were confined to this region, the rate of production would probably be as great as if it extended up to the cap rock; this is illustrated in Fig. 12. If edge water is present in the oil sand in the vicinity of the well, however, the oil will be floated to the top of the oil stratum, and the well cavity, in order to be effective, must be placed immediately below the cap rock. If water in the oil sand is likely to be a factor, uncertainty regarding its effect at various periods in the well's future history would make it advisable to enlarge the well through the full depth of the productive sand.

Screening Effect of Gravel or Crushed Rock

An advantage that might reasonably be anticipated for a well surrounded by a cavity filled with gravel or crushed rock would be the screening effect of the gravel in preventing sand from entering the pumping device used in lifting the oil to the surface. Ex-

Trapsocket



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The *Trapsocket* is the most efficient Sucker Rod Fishing Tool made to run in tubing which will permit the entire box and pin or coupling and pin to enter.

The *Trapsocket* is so constructed that the box or pin of any sucker rod or a rod broken between the box and pin can be caught without continual replacement of parts.

Rods with pins broken off; rods broken at the weld, broken at the wrench square or broken couplings can be successfully "fished" from tubing without using slips, Section No. 2. Usually, when running a Sucker Rod Socket which is provided only with slips to catch a broken pin or coupling it is necessary to buy a new set of slips for every job at a cost from $5.00 to $20.00.

With a *Trapsocket* this expense is eliminated as it is not necessary to use your slips, simply remove Section No. 2 and insert No. 1 into Section No. 3.

Rods are not gripped but the weight of the rods to be removed rests on a latch which in turn rests on a square shoulder. The latch is forged of CHROME NICKEL STEEL and is guaranteed to withstand the strain necessary to remove a 3,500-foot string of rods.

Among the present users are The Pure Oil Company, Gulf Production Company, Atlantic Production Company, Tidal Oil Company, Continental Oil Company, McMann Oil & Gas Company, Roxana Petroleum Company, Texas Oil Company, Rio Bravo Oil Company, Republic Production Co., Humphreys-Boyd Oil Company and others.

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Fort Worth, Texas **Mexia, Texas**

Trapsocket

Say you saw it in The Oil Weekly

periments performed by the author have indicated that, even with unconsolidated 50- to 60-mesh sands under pressures as high as 50 lbs. per square inch, little or no sand will find its way into the closely packed body of gravel filling the well cavity. The operator would, therefore, be entirely relieved of the many annoyances and loss of operating time occasioned by wear and "sanding up" of the pump, the clogging of screens and other difficulties occasioned by the presence of sand. It is considered feasible when this process is used, to surround the tubing and pump with a shop-perforated pipe, without screens of any sort. If of slot form, the perforations may have a width as great as twice the diameter of the gravel pebbles.[9] Such a liner would admit oil freely to the pump, and yet would hold back the gravel so that the pump could be withdrawn for repairs when necessary.

Analogies and Anomalies in Existing Practice

It has long been the custom of oil producers to "shoot" oil wells producing from hard and close-grained reservoir rocks, so as to form cavities and fractures about the wells, but no similar practice has been developed by operators in the fields deriving their production from unconsolidated sands and soft sandstones. While many observers have noted the increased productivity of wells operated in such a way as to encourage the production of large quantities of sand with the oil,[10] the reasons for the increased flow of oil as a result of this practice seem not to have been generally understood; and there has been little or no effort to develop a process that would result in the formation and maintenance of cavities about the wells. In fact, most operators have adopted the policy of holding back as much of the sand as possible in the hope of preventing the formation of cavities. The reasons for doing so are, primarily, to avoid the mechanical difficulties involved in pumping large quantities of sand with the oil, and the effects of subsidence, caving and shifting of sands about the well casings. It is thought that the method herein proposed, involving initial formation of the cavity before pumping is begun, with subsequent maintenance of the walls to prevent caving, will largely offset the difficulties that have hitherto been experienced.

Summary and Conclusions

In this paper, the increase in rate of production of oil from wells with increased diameter is demonstrated from both the physical and mathematical points of view and by experimental evidence.

The advantages resulting from this enlargement of the well through increase in the rate of productivity are pointed out, the gross or ultimate production being greatly increased. Because of the wider spacing of wells made possible by the increased radius of drainage, a considerable reduction in development expense may be effected. Because of the more effective exclusion of sand from the well by the gravel-filled cavity, there will be less time lost in repair work; hence production will be increased and operating costs reduced.

A process for enlarging wells where they penetrate oil sands, through the action of oil jets under pressure against the walls of the well, is proposed. If the walls of the cavity thus formed within the oil sand show a tendency to cave, they may be supported by filling the cavity with gravel or crushed rock, which will offer comparatively little resistance to the movement of oil. The porous medium with which the cavity is filled may also be placed with the aid of the hydraulic jet, using crude petroleum as circulating medium.

Experimental evidence is produced illustrating the application of the proposed process on an experimental scale and the increased recovery resulting from its application is demonstrated by comparative pumping tests which show a marked advantage for the enlarged well.

D. H. Greenwood, manufacturer's agent and also distributor of several lines of oil field equipment, has returned to headquarters in Los Angeles after three weeks spent visiting points in the Mid-Continent.

Pan American Line to Kern County Nearing Completion

Los Angeles, Calif., April 18.—About 135 miles of the Pan American pipe line from Los Angeles harbor district to Kern County has been completed and it is expected it will be in operation by August 1, if not sooner. The building of the line was held up considerably over right of way tangles, otherwise it would have been completed and running oil at this time. This line parallels a portion of the distance the line operated by the General Petroleum Corporation. The completion of the Pan American line will furnish two lines to bring oil from the Kern River country, to the Los Angeles district.

Los Angeles, Calif., April 18.—The Union Oil Company's Newlin 1 at Ocean Park Heights between Los Angeles and the ocean resorts has reached a depth of 4060 feet, drilling in shale and shell, without finding either oil or gas. Many believe this wildcat is doomed to failure, as seldom has a wildcat in Southern California ever made a producer if an oil sand of some sort had not been found before reaching 2500 feet.

Deep Well in California Pumping 100 Bbls. Daily

Los Angeles, Calif., April 18.—The General Petroleum Corporation's Amstoy 1 at Rosecrans, the deepest producing well in the world, during the past week was pumping a little better than 100 barrels of oil a day. During the week a twelve foot working barrel was used. Two and a half inch tubing is being used, the depth being changed frequently during the experiments now being made. It is expected that the well later on will be tried out on compressed air to see if production can be increased.

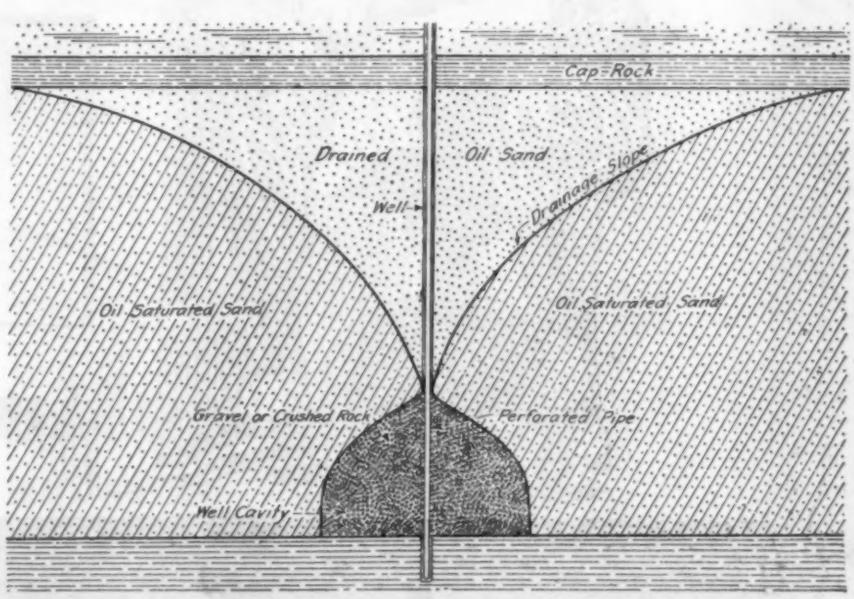
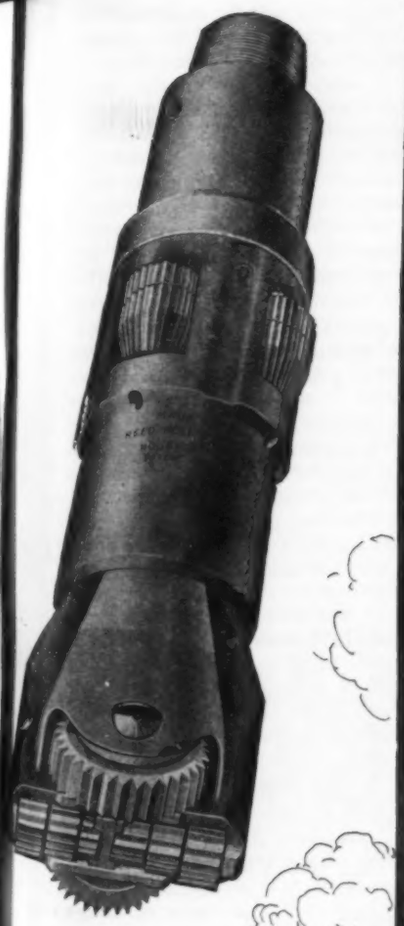


Fig. 12.—Position of a gravel-filled cavity about a well to drain a thick oil sand; because of depression of fluid level in region of well, only lower portion of sand is productive; water is assumed to be absent.

[9] F. A. Graser: Thesis on "A Study of the Screening Effect of Slot Openings in Unconsolidated Sands," University of California, 1924; conducted under the supervision of author.

[10] W. H. Kobbe: Probelms Connected with the Recivery of Oil from Unconsolidated Sands. Trans. (1917) 56, 799.

GOOD JUDGMENT



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Co-Operation Necessary in Safety Work

Management and employes must work together if maximum results are to be accomplished

An Address Before the Petroleum Safety Council at Dallas

By Harry H. Smith,
Secretary Mid-Continent Oil and Gas Assn.

KNOWING nothing in particular about the technique of accident prevention work, I have to assume a premise for my remarks concerning it. I therefore assume that there are at least two basic divisions of the work of safety promotion: First, the activity of the individual or company employer in furnishing a reasonably safe place in which the employees of the particular plant are to perform their duties and in establishing personal contact and consultation with individual employees to promote observance of local rules and safety practices. Second, the great field which individual or unco-ordinated effort either cannot reach or cannot adequately cover. This is the division of co-operative effort, so named because the indispensable prerequisites to success are the co-operation and contribution of many enterprises engaged in the particular line of business. This classification does not leave out that more attenuated form of natioanl co-operation between all the various kinds of industry to study and promote the general principles of safety, but treats the latter as an incident of that more intensive, local and administrative co-operation within this one industry, in the five States of the Mid-Continent Field and Gulf Coast, which the Petroleum Saftey Council of the Mid-Continent Oil & Gas Association was organized to effectuate.

These lines must be definitely drawn and the province of our Safety Council clearly apprehended if it is to merit and receive support. The point I try to make is that this is no mere duplication of effort and expense. While we as an organization will recommend support for national safety organizations in this and other industries and will in turn draw inspiration and knowledge from that source as well as from individual experience of our members, the fact remains that if the particular kind of work we have in mind could have been performed by the general organizations on the one hand or by the unco-ordinated efforts of individual units on the other, our regional Petroleum Safety Council would never have been organized.

Where Co-operation Is Essential

If I have adequately traced the boundaries of the Petroleum Safety Council's general domain, I want to return for a moment to a consideration of the particular items of work it may be expected to do because of the fact that co-operation is inherently necessary to their accomplishment. In the first place it occurs to me that the petroleum business calls for co-operation in safety work to a greater extent than many other industries because of its peculiar structure and wide scattering of employes. We have in this general field, in addition to some 340 refineries located in the cities, no less than 434 natural gasoline plants, about 40,000 miles of pipe lines with pumping stations and approximately 100,000 producing oil wells all scattered about in and adjacent to scores of oil pools in five States. A particular operator or unit may carry on operations in one or all of the States and may have a limited number of employes in a dozen to 100 different localities when he is not in close contact with them but where they are in close association with the employes of numerous other operators. This situation not only affords an opportunity but would seem to demand, in the name of efficiency and reduced expense, the co-operative handling of such work as benefits all alike and is susceptible of uniform method of approach.

Of the various item of endeavor that may be carried on co-operatively to better advantage I would enumerate six, as follows: (1) Inculcation of the principles of safety, (2) Conference with governmental agencies, (3) Effective statistical gathering, interpretation and dissemination, (4) Organization of local safety societies of employees, (5) Promotion of good will between employer and employe, and (6) Gathering, utilization and transmission of newly discovered elements of the safety science.

Educational Work

The brief description I have given of the oil industry and the many localities of its operation serves to emphasize the need for the motion picture and accident bulletin work we are doing. The business also has many ups and downs attended by a great changing about of employes from one company to another, otherwise known as the labor turn-over. One company may educate its employes concerning safety but another may not. In case of small concerns it is seldom attempted. With a co-operative program the great mass of workmen will be instructed to the ultimate advantage of all operators who subsequently employ them.

What is anybody's business is generally nobody's business. When a governmental agency is about to inflict a lot of useless or unwise requirements upon an industry which has no organization to confer and combat through concert of action, the governmental agency usually has its way. And although its motive may be good the quality of its service could be improved through access to an organized agency of the industry prepared to discuss the matter intelligently. There is a growing disposition upon the part of government, national and local, to prescribe rules, regulations and requirements on business conduct. These include safety practices and appliances. We recently had a demonstration of the value of the Petroleum Safety Council in its conferences with the Labor Commissioner of Oklahoma who seemed to appreciate the assistance given him in pruning down his proposed mechanical safety requirements to a basis of reason and propriety. If the Council had not been in existence there would have been no agency fully competent to handle that situation. Its services in this regard will be needed in the other States.

Accident Statistics

Statistics of accidents properly gathered, compiled and analyzed point a moral. They tell the story of cause and effect. The study of them reveals the place and manner of new precautionary steps to avoid repetition. Since the law requires reports of accidents to state industrial commissions, the Council believes that it is entirely feasible to co-operatively devise a uniform method of collecting, classifying and reporting these statistics to accomplish three worth while purposes, to-wit: (1) To enable the operator affected to have in his office a more complete and valuable record of his accidents and compiled in a manner to enable him to make detailed comparison of his experience with the compiled average experience of other operators, (2) To facilitate the making of his reports to the state agency, and to promote uniformity in the character and form of report to be made by him in each of the states in which he operates, and (3) To enable the operator and the Council to analyze the compiled reports of all

(Continued on page 92.)

Ventura Takes Spot Light in California

Another Associated well blows in while running liner and under control made 3200 barrels oil

By W. E. Green
Staff Representative

Los Angeles, Calif., April 18.—The Ventura Avenue field in Ventura County took the spot light again this week, when the Associated Oil Company's Lloyd 5 blew in while running liner at a total depth of 4695 feet for an estimated 5000 barrels. The well made 3200 barrels of clean oil when brought under control.

This well was drilled some five years ago to a depth of about 4000 feet and had produced more than a half million barrels of oil before work was started to deepen it to the bigger pay found recently by the Associated in two other wells. The hole was drilled to 4695 feet, and liner was being run. The liner hung up at about 4000 feet and the pressure got away from the crew, throwing oil and mud in every direction.

Much Open Hole

There is about 695 feet of open hole and the well is making about 4,000,000 cubic feet of gas in addition to the 3200 barrels of oil. The well will be permitted to produce in its present condition as long as the production holds up and the flow remains clean. The Associated is drilling two other wells on the Lloyd lease and both should be completions in the next two or three weeks. The Shell Company is drilling seven wells in the Avenue field, while about 20 other holes are drilling in various parts of the county, largely in the proven territory.

Find Shallow Sand

E. J. Miley has 4000 acres under lease in the Red Mountain area of Ventura County, northwest of the Ventura Avenue field, and his No. 1 Casitas found an oil sand slightly below 315 feet and constant coring down to 390 feet showed streaks of what looked like rich oil sand. The oil found in Ventura County, is of paraffin base. and of light gravity. This shallow sand indicates that it would produce a light gravity oil with paraffin base. The hole is now being reamed and a string of 20-inch will be cemented at 315 feet and then a production test will be made.

Oil men say it is not unusual to find slight oil showings in the Monterrey shales at shallow depths in Ventura County, but it is rather unusual to find a sand at this shallow depth appearing as rich as the sand that is cored from the Miley well. For this reason there is a possibility that Miley will secure a small producer at this depth. But he is playing safe, cementing large casing at 315 feet, so if the production test is not worth while he can continue down in the search for deeper stuff. Ventura County is due to rather a big play this summer and the production of the country is sure to hold up and probably show further increases, from the wells now drilling in the proven territory, even if no other territory is opened.

Oil Workers Play

The oil workers, producers, operators and friends got together this week at Ventura for a big barbecue and 6000 pounds of meat appeased to a large extent the appetite of those present, which numbered close to 4000. Ralph Lloyd of Los Angeles gave a talk on the oil situation and also paid a tribute to the oil workers, giving them much credit for the success of the operators in California.

In the Los Angeles district the past week the new Ingelwood field in the Baldwin Hills easily led in number of completions and increasing the daily production from 2000 barrels the previous week to about 3500 barrels a day during the week closing today. The daily production the latter part of the week was close to 4000 barrels, although the daily average over the weekly period did not exceed 3500.

Big Well for Standard

The Standard Oil Company was credited with the best well of the week when its L. A. Investment 1-4 came in at 2211 feet for 250 barrels of clean oil on the pump. The next day this production increased to 450 barrels and on Thursday made 650 barrels. The well made 810 barrels on Friday. The Petroleum Securities' Cone 3 was the next best with a daily production of 400 barrels at 1793 feet. The same company's Cone 2 was good for 300 barrels at 1737 feet. The Associated completed No. 1 on the Vickers lease for 275 barrels of clean oil at 2809 feet, the deepest well of the week.

New derricks are going up every week at Ingelwood and since pipe lines are now operating, the oil can be moved with ease. Practically every one of the larger companies operating in the Los Angeles Basin has acreage in the field, but the Standard has several thousand acres and is starting rather a large drilling campaign. Several of the other leases are rather small and lying in such a manner that many offsets are called for. This situation is forcing a spirited drilling campaign. The oil is of low gravity, around 17 to 20 gravity, not endangering the total production of high gravity oil in the Basin.

California Production Up

The production in California the past week showed a further increase, the total daily average now being 604,500 barrels. Long Beach showed a slight further decline the past week, as did Dominguez, but Huntington Beach and Torrance held their own. Rosecrans was up 1000 barrels and Inglewood showed an increase of about 1500 barrels. The new well at Ventura and a few wells in other districts helped to swell the total.

There are no indications that production in the state will show any real decline in the next few weeks. It may become necessary to close in more of the heavy oil producers, but the production of light oil in the Los Angeles Basin will likely continue to hold its own. Heavy oil stocks are piling up and there have been slight increases the past three months in stocks of light oil, but it is not thought that light stocks will show any real increase in the next month or two, or rather through the summer.

Old Fields Hold Up

The old fields of Long Beach, Huntington Beach and Santa Fe Springs are holding up surprisingly well, and the production curves for these fields are flattening out. Hardly any new drilling is carried on in these fields, except at Huntington Beach, but old wells work over to the profit of the owners and improved pumping equipment is another help.

Smackover Oil Going Begging at 30 Cents

Flood of production from deep-sand wells 100,000 barrels over handling facilities

By Special Staff Correspondent

El Dorado, Ark., April 20.—The completion of another series of gigantic deep sand gushers, with the consequent increase of production to a total of 286,000 barrels, as of today, served to bring about last week the collapse of the heavy oil market in Arkansas, which has been threatening since the fertility of newly found deep sand became generally known early last month. On April 14, the Standard Oil Company of Louisiana, followed by other major purchasers, announced a twenty cent reduction in Smackover heavy, lowering its market value to 80 cents per barrel at the well. As production averages continued to mount to new high levels, the following announcement was made by the Standard Oil Company, which is the dominant market factor in this territory, on April 16:

"The production of heavy Smackover oil from a recent deep sand development has increased the production of that field to an extent far beyond facil ties for caring for the oil; and, in view of this situation, the Standard Oil Company of Louisiana is today posting a differential price schedule and arranging to continue shipments of this heavy crude to the extent of its present facilities; and will arrange to handle additional oil to storage, insofar as it is possible to do so. Due to the over production, the company will be unable to make new connections, but will only be able to handle purchased oil from such leases as are already connected."

Coincident with this announcement, a differential price of 80 cents and 50 cents per barrel on heavy oil was posted. The new posting was explained as follows:

"The Standard Oil Company of Louisiana will, effective today continue to run purchases of Smackover crude of below 25.0 gravity from its present connections, not to exceed the present shipping facilities, at the present price of 80 cents per barrel; and will run to storage such additional crude below 25.0 gravity, from its present connections, as can be cared for at a price of 50 cents per barrel."

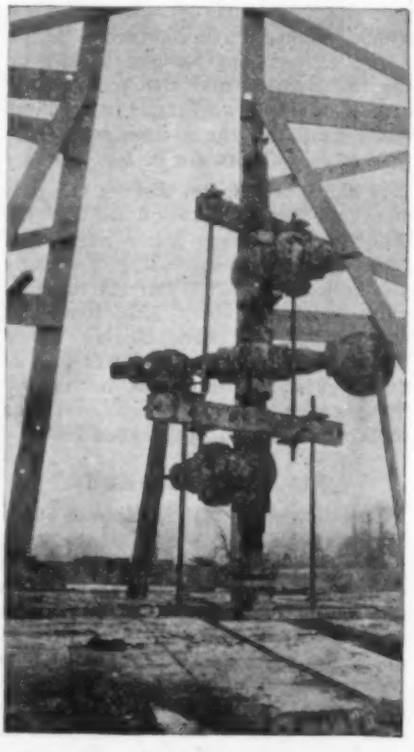
Note that it is specifically stated that no new connections will be granted; and that the higher price is to be paid only for such oil as can be handled through existing shipping facilities. Quantities in excess of the capacity of present lines are to be run to field storage and paid for at the lower figure.

Another Cut

On April 18, a further cut on heavy oil was announced, and the lower grades of light oil, produced in the Louann district, were raised ten cents per barrel. The postings on the higher grades of light oil were not changed. At present, heavy oil accepted for shipment is being paid for at the rate of 60 cents per barrel, and quantities in excess of shipping facilities accepted for storage are being paid for at the rate of 40 cents per barrel. All other major purchasers have posted a price of 40 cents per barrel on heavy oil.

The Crusader Pipe Line Company has withdrawn its posting on Smackover heavy oil, and, it is said, is offering by direct negotiation prices ranging from 30 cents to 40 cents per barrel.

All of the price schedules offered by the various purchasers of Smackover crude are published elsewhere in this issue, from which it will be noted that, with the exception of The Texas Pipe Line Company, which posts on three grades only, all of the major purchasers have met the 10 cent increases posted by the Standard on light oil ranging from 24.0 degrees to 24.9 degrees and from 25.0 degrees to 25.9 degrees. The Standard, Gulf and Texas Companies have abolished the grade of 28.0 degrees and above, but the Louisiana, Atlantic and Shreveport-El Dorado companies retain it, offering a premium of 15 cents per barrel for oil of that specification.



Gulf Refining Company's Waterman C-1, E. Pollack Headright Survey, Harrison County, Texas. This is the Trinity Sand discovery well in the Waskom Gas Field

The Standard and Gulf companies have begun work on an extensive program of earthen storage, and a report has been circulated to the effect that the Standard will proceed at once with the construction of an additional pipe line outlet from the Smackover district to the Mississippi river, down which oil may be barged to New Orleans. It is said that this new line will be approximately one hundred miles in length, extending from El Dorado to Lake Village, Arkansas, the eastern terminus to be across the river from Greenville, Mississippi. No definite announcements have been made as yet, but it is known that a right-of-way over this route was surveyed by Standard engineers a year or so ago.

Production

The production situation at Smackover, according to latest reports, is approximately as follows:

Present daily production from 65 deep wells (75 have been completed but ten have ceased flowing	197,950
Present daily production from old pumping wells completed in the 2000-foot sand.....	56,200
Present daily production of light oil in the West Field, around Louann	32,150
Total current production.....	286,300

A prominent pipe line executive, interviewed today by a reprsentative of The OIL WEEKLY, pointed out the startling fact that current production, as represented by the foregoing total, exceeds by more than 100,000 barrels per day the combined capacity of all the pipe lines and gathering and loading systems which afford an outlet for Smackover oil. This means that distress oil is being run to field storage, chiefly earthen, at the rate of at least 100,000 barrels per day. At Smackover there are six pipe lines, having a total capacity of 75,000 barrels per day, and thirteen gathering and loading systems,

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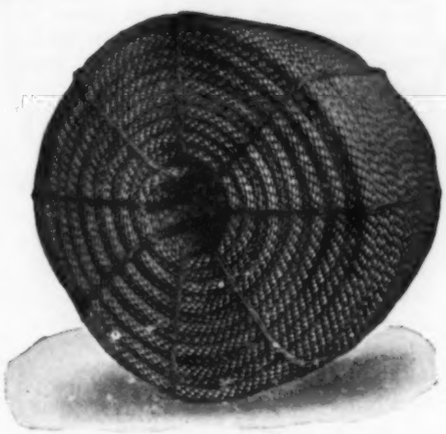

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through which a total of 110,000 barrels per day may be shipped out through tank cars.

The Gulf and Roxana companies are making extensive extensions and enlargements to their gathering lines and loading rack facilities, and large earthen pits are being excavated throughout the deep sand area.

The Imperial Oil and Gas Company's 25,000-barrel gusher on the Murphy lease in section 9-16-15, has bridged over and ceased flowing, but a companion well, No. 6, on the same tract, was brought in last week with an initial production of 10,000 barrels per day, which has increased to 18,000 barrels per day as this is written. The Roxana Petroleum Company's Murphy No. 1, in the same section, which showed an initial production of 48,000 barrels per day by gauge, has been choked in to around 800 barrels per day. The Gulf Refining Company's Murphy No. 14, in section 4-16-15, a 25,000 barrel well, has been pinched in to around 8000 barrels per day. The Madza Oil Company's Lawton No. 1, in section 10-16-15, is flowing 15,500 barrels per day, and a number of wells are credited with an average production of from 7500 to 10,000 barrels per day.

Although one hesitates to hazard a guess as to what may happen at Smackover, the most spectacular field ever developed in this territory, it nevertheless seems possible that the great boom as evidenced by the extent of drilling and the resulting flood of production, may reach its peak within the next fortnight or so. The great number of new wells begun about one month ago, when the fertility of the deep sand first became generally known, are now nearing completion, and, with oil down to 30 cents and 40 cents a barrel and often unsaleable even at that price, it is probable that operators will not be so eager to begin new wells, since storage and transportation facilities are taxed to capacity to handle current production alone. It seems probable that production averages may continue to rise until a peak of from 300,000 to 350,000 barrels per day has been recorded. Of course, if storage were available, and if drilling were continued at the present breakneck pace, it is possible that a maximum of from 400,000 to 500,000 barrels per day might be attained, but a lack of storage and transportation facilities will force the closing or pinching-in of the gushers before such a total is reached.

Extent Undefined

The boundaries of the deep sand pay are as yet undefined, save that salt water wells have been completed by Ramage et al, in the northwest quarter of section 6-16-15, and by the Houston Oil Company, in the southeast quarter of section 31-15-15. These wells, which are from three quarters of a mile to a mile and a quarter inside the boundaries of the shallow-sand production, seem to limit the deep-sand pay in the westerly direction. A few other salt water wells have been brought in at other points, but, due to questionable casing seats and mechanical troubles resulting from hasty drilling, none of them seems to offer conclusive evidence as to the probable extent of the productive area. The Simms Oil Company has completed a 30 million cubic foot dry gas well on the Cook lease, in the northeast corner of section 16-16-15. This well, which was finished in four feet of sand at a total depth of 2363 feet, is located about a half mile southeast of the nearest deep-sand oil wells.

The proven area of the deep-sand reservoir now extends about three miles, east and west, by three miles north and south, having its center in sections 4 and 9, of township 16-15, where the biggest wells have been made.

Probably New Shallow Area Added to Bellevue Section

Shreveport, La., April 20.—The probability that the productive area of the Bellevue shallow field, in Bossier parish, may prove to be more extensive than formerly supposed has been revealed by the recent completion of a large shallow gas well by Wetherbee and others at a location near the center of section 23-19-11. The well is blowing wild from a total depth of 386 feet. As casing was not cemented before the test was made, no attempt will be made to close the well in until cement poured around the casing has hardened. Estimates credit it with an initial volume of from ten to fifteen million cubic feet of gas per day. It apparently has drilled itself deeper since it came in and is now making some salt water.

The Bellevue district embraces two small productive areas. The larger covers the north three-fourths of section 15, the east half of the northeast quarter of section 16, the northwest quarter of section 14, the southeast quarter of section 10, and about half of the southwest quarter of section 11. The smaller covers less than one hundred acres in the southeast corner of section 22, the southwest corner of section 23, the northwest corner of section 26, and the northeast corner of section 27. Both areas are well defined by salt water wells drilled around the edges. The gas well is located about a half mile northeast of the smaller of the two oil producing areas, and seems to indicate that a third small area may be found to be productive. Salt water wells have been drilled at points ranging from a half to three quarters of a mile in all directions from the new well. A few short-lived gas wells were made in the shallow sand at Bellevue, and the Blossom and Trinity sands have also yielded gas production.

Urania

Zeigen and others are nearing the final casing seat in their offset to the discovery well at Urania, and their test may be completed within the next ten days. They have built a derrick for a second well in section 19-10-2e. The Goulf and Monroe Drilling Company is rigging up on the Harper land, in section 23-10-1e, and Bill Rowe has resumed rigging up on his Urania No. 1, in section 7-10-2e.

Phillips Officials Visit Texas Gasoline Property

Breckenridge, Texas, April 18.—Officials, directors and leading stockholders of the Phillips Petroleum Company arrived here Saturday morning in a special train to inspect the newly acquired natural gasoline plants and producing properties held by the company in the Central West Texas district. The party included a number of prominent Eastern capitalists, and made the trip here in a special train from New York, with a brief stopover at Fort Worth, where the members were entertained Friday evening by Amon G. Carter.

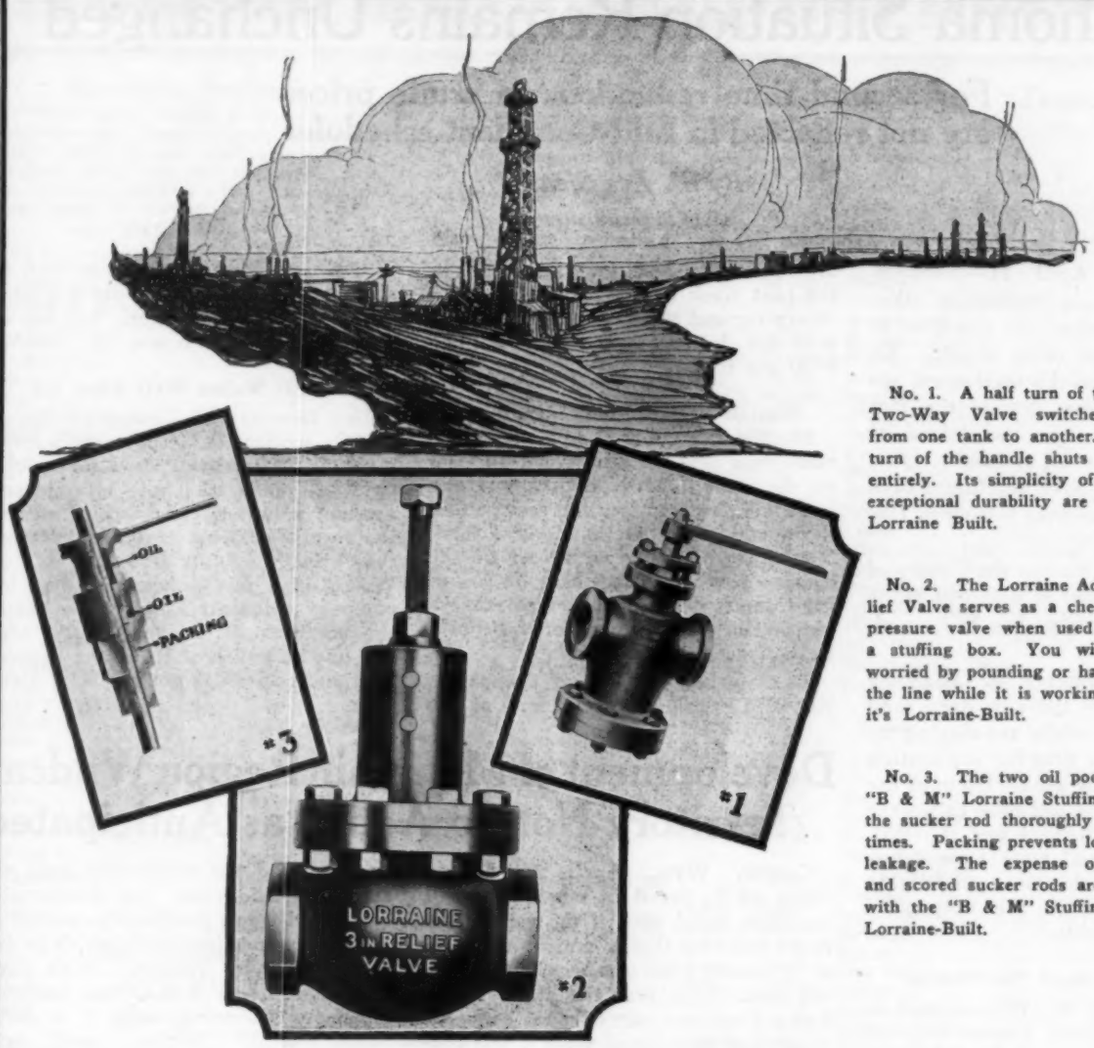
A typical West Texas barbecue was given the visitors Saturday by A. E. Landreth, Chas. Roeser, "Tol" Pedleton, Breck Walker and others of Breckenridge, and visits to the field were made in automobiles.

Marine Buys Control In Sierra Refining

Los Angeles, Calif. — The Marine Corporation has secured controlling interest in the Sierra Refining Company. The Marine some time ago secured a block of stock in the Continental Petroleum Corporation of Nevada, which owned the Sierra. At that time it was reported that the Sierra would handle all of the oil of the Marine and that the Sierra had made a deal to turn all fuel oil to the Pacific Oil Company, Southern Pacific subsidiary. The Sierra had been operating a refinery in the Los Angeles district and this plant probably will be enlarged, and certainly kept running.

Jay P. Walker of Oklahoma City, president of the American Tank Company, is on an automobile tour of the Rocky Mountain section in the interest of company business.

E. R. Lederer and Robert C. Ream have been elected directors of the Texas Pacific Coal and Oil Company, the former being elected a vice president, succeeding Birch Helms, who has resigned. The company's directorate has been increased to fifteen members.



No. 1. A half turn of this Lorraine Two-Way Valve switches the flow from one tank to another. A quarter turn of the handle shuts off the flow entirely. Its simplicity of control and exceptional durability are natural—it's Lorraine Built.

No. 2. The Lorraine Adjustable Relief Valve serves as a check, or back-pressure valve when used in place of a stuffing box. You will never be worried by pounding or hammering on the line while it is working for you—it's Lorraine-Built.

No. 3. The two oil pockets in this "B & M" Lorraine Stuffing Box keep the sucker rod thoroughly oiled at all times. Packing prevents loss of oil by leakage. The expense of repacking and scored sucker rods are eliminated with the "B & M" Stuffing Box—it's Lorraine-Built.

Lorraine Valves and Stuffing Boxes

have won the confidence of thousands of users because of their unexcelled efficiency, their simplicity of construction and operation.

Through past performance the name Lorraine, on oil well specialties, has come to stand for supreme quality, greater efficiency, and a guarantee of perfect workmanship. When you buy a Lorraine Specialty you buy satisfaction also.

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OIL WELL SPECIALTIES

114½ and Alameda Streets

Los Angeles, Calif

Oklahoma Situation Remains Unchanged

For second time reductions in crude prices are not reflected in Mid-Continent schedules

By W. Lee Sloan

Staff Representative

Tulsa, Okla., April 21.—Notwithstanding the uneasy feeling in other parts of the country, the situation in Oklahoma remains fairly steady. No signs of a break in the market are apparent at this time, despite the fact that the reduction in the prices of crude in South Texas, Arkansas, Ohio and Pennsylvania have heretofore been deciding factors in price setting in Oklahoma.

For the second time in the history of the industry, the cut in prices of crude of these outside states has had no effect here.

The center of interest in Oklahoma is directed toward the new deep sand at Garber, where wells are rigging up in all parts of the field for exploration tests to the Wilcox sand. Up until the past week the sand had been called the Bartlesville, the Belveal and the Wilcox sand; but final tests have determined that it is the same oil bearing formation present in the deep sand areas of other fields.

New Garber Sand The Wilcox

The finding of the Wilcox sand in the deep well of the Sinclair Oil and Gas Company on the Belveal farm at Garber gives the field eleven oil bearing sands. Ten of these sands are found above the 2300 foot level and it is the formations from 2300 to 4300 feet that are being tested by new wells. The most shallow sand of the field is the Hoy at 1100 feet. The Whitney sand is found at 1300 feet. At 1600 feet the Walker is encountered, followed by the Belveal sand a hundred feet deeper. The Campbell sand is evident at 1800 feet, followed by the Crews, the Garber, the Covington and the Ponca sand and the deep Wilcox, until the 2300 foot level is reached. There is one other small sand between the Ponca sand an the deep Wilcox, but the Sinclair well did not have a sufficient showing there to warrant the completion of the well in it. Tests now drilling may find some kind of a pay at the point where the Sinclair well had a small showing.

In the extreme south part of the Garber field, the Sinclair Oil & Gas Company has converted an old well into a deep test and is now drilling in a six-inch hole at 3535 feet. The well is located in the northeast of the southeast of section 30-22-3 west.

It has been mutually agreed by contractors in the field that wells will be drilled to the 3400 foot level with a the past week has no indications of a rotary rig and then standardized. The price for drilling to this level will be $9.00 per foot.

Sinclair Makes Four Locations

The Sinclair Oil & Gas Company has made four new locations for deep tests on the west line of the Crews Heirs lease, which comprises the east half of the northwest of section 30-22-3 west, Sinclair owning the west half of the quarter section. The Champlin Refining Company of Enid has also made a location in the northeast of the southwest of section 22-24-4 west.

The Sinclair Oil & Gas Company's No. 25 Belveal, discovery well of the Garber deep sand continues to hold up at the rate of 2500 barrels per day from a total depth of 4394 feet. The top of the sand in this well was 4377 feet.

Bement Makes Well After All

The Bement Oil Company's No. 1 Box in section 30-23-5 is again a flowing well. After being dead for several days last week, the hole was cleaned out and it is now flowing by heads at the rate of 100 barrels per day from the Peru sand at 2753 feet. C. J. Wrightsman has announced that his company will start a Peru-sand test in the southeast of section 24-22-4 four and one half miles south of the Bement well and two miles northwest of Pawnee.

Development of Mountain Region Wildcat Territory Not So Active as Anticipated

Casper, Wyo., April 20.—Should crude oil be taxed in storage after it has been taxed once at the well? This is the question that is causing the state of Wyoming a lot of worry at the present time. Last year the Midwest Refining Company carried over some oil which had been taxed when it was produced and the tax authorities claim that additional levies should be assessed if the crude is to be held. In other words, they have assumed the same attitude toward the producers as toward the owner of a house, who must pay taxes every year the house is owned. If the companies who store oil lose the fight against additional levies after the oil is produced, the only way they can beat the assessments is to refine the oil or get rid of it the best way they can. The state of Wyoming assesses taxes against the oil produced in the state on the basis of the previous year's production. If a field produced 1,000,000 barrels in 1923 and 30,000,000 barrels in 1924, the producer would pay taxes on the 1,000,000 barrels only. During 1924, however,, if the field produced only 10,000,000 barrels, the producer would pay taxes on 30,000,000 barrels. If all this oil were stored more than a year it is the contention of the state that the oil should be taxed again as common property. The outcome of the fight holds considerable interest in this territory.

The Producers and Refiners Corporation well No. 6, located in the Lost Soldier field, caught fire the first of the week, but was saved after the rig and most of the equipment were destroyed. The crew had temporarily suspended work, pending the arrival of suitable connections with which to put the well under control. With little warning a heavy flow of gas suddenly developed, bringing with it a large amount of oil. Within a very short time the derrick was in a mass of flames, but prompt action by a large crew extinguished the flame only eight hours after it started. Although some estimates are very much higher, conservative estimates place the production at about 1400 barrels. The company has announced that the well will be produced from the present horizon, subject to being deepened at a later date.

Wyoming Wildcats

New fields will be discovered in Wyoming during the coming summer, according to H. F. Bretschneider, vice president of the Midwest Refining Company and chief of the land department of this organization. Mr. Bretschneider recently gave a lengthy interview, showing the probable scope of the work of his company during the year. He said that his company would drill 250 wells in the Salt Creek field besides a large amount of wildcatting in all parts of the state. Exploring for new fields has been somewhot disappointing, he said, despite the fact that some new fields had been found. Out of a possible 100 tests made only about 15 had been successful, he said, the combined cost of the wells in question being something above $7,000,000.

AVERAGE DAILY PRODUCTION FOR U.S.

Mountain States

The rather sharp increase in pipe line runs for the Mountain States recorded last week was lost during the past week, when the average daily runs decreased materially. Salt Creek led the decline with a loss of about 5000 barrels. Runs for both weeks follow:

WYOMING

	Past Week	Prev. Week
Salt Creek	58,450	63,410
Lost Soldier	4,980	4,200
Grass Creek	4,650	4,825
Big Muddy	3,610	3,240
Rock River	3,250	2,890
Teapot	1,865	2,160
Elk Basin	925	950
Lance Creek	600	645
Hamilton Dome	600	570
Osage	340	375
Lander	275	250
Greybull	185	110
Poison Spider	80	90
Rex Lake	50	100
Pilot Butte	30	45
Ferris	50	55
Totals	79,940	83 915

COLORADO

Fort Collins	1,340	1,180
Craig	850	790
Florence	250	240
Tow Creek	160	160
Rangeley	100	110
Boulder	30	25
Totals	2,730	2,505

MONTANA

Cat Creek	3,225	3,180
Kevin-Sunburst	3,010	2,950
Totals	6,235	6,130

NEW MEXICO

Artesia	1,040	740
Rattlesnake	425	500
Hogback	530	600
Totals	1,995	1,840
Miscellaneous	200	200
Grand Totals	91,100	94,590

Kansas

Greenwood	23,980	23,700
Eldorado	13,990	13,925
Rainbow Bend	12,000	14,650
Elbing and Peabody	5,735	5,750
Augusta and Douglas	3,280	3,290
Fox-Bush	3,000	3,050
Blankenship	2,430	2,440
Florence and Covert	2,135	2,150
Other fields	18,165	17,640
Totals	84,695	83,795

California

Los Angeles, Calif., April 18.—The daily average production of the California fields the past week, compared with the previous week, with number of producing wells in several fields, was about as follows:

	Past Week	No. Prod. Wells	Prev. Week
Long Beach	112,000	516	113,500
Santa Fe Springs	52,000	350	51,000
Dominguez	46,000	57	48,500
Huntington Beach	42,000	289	42,000
Torrance	40,000	550	40,000
Rosecrans	19,000	45	18,000
Inglewood	3,500	17	2 000
Others	290,000		288,000
Totals	604,500		603,000

Oklahoma

Field—	Past Week	Prev. Week
Tonkawa	73,810	75,055
Burbank	60,540	61,315
Bristow	46,100	45,820
Osage (outside Burbank)	35,120	34,250
Cromwell	46,100	39,725
Gilcrease-Papoose	26,705	25,575
Okmulgee	23,740	23,800
Cushing	22,120	22,200
Hewitt	15,600	15,740
Wewoka	12,465	12,170
Otoe	7,745	7,800
Stroud	3,420	3,460
Braman	2,560	2,565
Other fields	87,465	86,235
Totals	463,490	456,710

Louisiana

Haynesville	13,650	13,745
Caddo Light	9,660	9 070
Cotton Valley	8,425	8,350
Homer	6,900	6,950
Vinton	5,850	5,900
Bull Bayou	4,550	4,550
Bellevue	3,900	3,850
Caddo Heavy	2,220	2,270
Evangeline	1,050	1,075
Edgerly	665	1,000
Elm Grove	640	645
Lockport (Lake Charles)	215	225
Anse La Butte	20	20
Totals	57,745	57,650

Arkansas

Smackover heavy	226,000	95,000
Smackover light	32,150	33,315
El Dorado	8,520	8,640
Stephens	1,910	1,975
Irma	1,300	1,400
Totals	269,880	140,330

Texas

NORTH-CENTRAL

	Past Week	Prev. Week
Wortham	58,200	63,000
Corsicana-Powell	52,835	53,090
Archer County	40,250	40,100
Mexia	20,350	19,450
Reagan County	19,135	14,055
Electra	17,605	17 300
Stephens County	15,880	15,955
Burkburnett	14,965	14,710
Eastland County	10,410	10,415
Young County	11,160	10,425
South Vernon-Wilbarger Co.	6,950	6,475
Richland	6,240	6,400
K-M-A and Iowa Park	4,260	4,170
Callahan County	4,355	3 930
Panhandle District	2,870	2,775
Moran-Shackelford County	2,630	2,745
Mitchell County	1,725	1,775
Brown County	1,675	1,260
Currie	1,520	1,580
Strawn-Palo Pinto County	630	645
Petrolia-Clay County	605	535
Montague County	105	70
Coleman County	70	70
Thrall-Williamson County	50	40
Jack County	25	20
Throckmorton County	20	20
Scurry County	40	10
Totals	294,560	291,020

GULF COAST

Hull	24,850	28,500
South Liberty	14,050	13,045
Orange	12,900	13,900
West Columbia	12,250	12,275
Goose Creek	9,300	9,900
Humble	4,710	4,725
Sour Lake	4,275	4,225
Saratoga	1,610	1,850
Batson	1,460	1,550
Blue Ridge	1,275	2,300
Spindletop	1,250	1,300
Damon Mound	1,150	1,150
Pierce Junction	640	625
Big Creek	575	500
Barbers Hill	140	140
Markham	90	80
High Island	50	60
Nacogdoches	30	30
Totals	90,605	96,155
Luling	29,800	29,800
Mirando	10,600	11,000
Lockhart (Lytton Springs)	4,270	4,200
Somerset	2,980	2,980
*Miscellaneous South Texas	670	860
Totals	48,320	48,840
Totals Texas	433,485	436,015

*Includes Callahan, Rockdale and Minerva.

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is compiled each week by The OIL WEEKLY, and shows daily production average for each state or section.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyo. Mont. Colo. New Mexico	Calif.	Ark.	U. S. Total
March	762,684	284,874	78,567	388,221	69,864	407,946	55,783	97,800	128,352	650,790	119,869	1,917,023
April	777,590	276,595	76,755	380,005	71,015	429,980	54,740	101,250	127,700	649,825	128,750	1,943,270
May	763,320	267,475	74,175	374,915	71,490	424,355	60,655	103,800	127,770	640,930	148,630	1,952,545
June	799,230	260,785	74,335	375,310	74,265	464,175	62,660	105,750	125,735	628,400	157,165	1,993,465
July	815,830	254,665	75,445	378,365	81,545	479,620	63,855	107,175	124,305	620,175	148,655	2,003,695
August	861,640	254,520	75,700	377,045	85,765	521,355	62,595	107,000	123,895	619,200	142,740	2,037,890
September	886,650	253,243	76,953	366,197	86,758	546,647	62,162	107,622	117.345	611,500	131,343	2,029,580
October	855,823	247,222	75,713	359,861	86,884	521,717	62,493	106,600	107,270	605,060	123,235	1,972,902
November	851,733	248,467	71,648	369.621	86,031	517,237	66,117	106,375	91,205	594,000	119,893	1,950,478
December	873,344	267,065	65,437	385,410	88,065	518,213	59,602	106,875	83,472	606,875	111,402	1,959,917
January	906,160	334,305	65,065	448,900	88,390	483,465	56,520	106,200	78,435	602,600	106,280	1,970,350
February	861,130	292,796	63,885	405,195	88,790	479,545	56,825	105,125	87,710	598,375	106,085	1,927,680
March	839,200	301,795	83,800	434,410	84,965	452,440	58,030	100,550	90,900	605,775	112,425	1,939,520
April 4	829,275	295,670	96,605	434,995	82,940	450,665	58,520	100,000	91,155	599,900	119,320	1,937,495
April 11	831,525	291,020	96,155	436,015	83,795	456,710	57,650	97,000	94,590	603,000	140,330	1,969,090
April 18	842,745	294,560	90,605	433,485	84,695	463,490	57,745	98,000	91,100	604,500	269,880	2,102,895

*Includes North Central Texas, Kansas, Oklahoma.

NOTE—Wortham, Corsicana-Powell and Mexia production included in North Central Texas.

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

April 17.—Effective at the opening of the market today the Joseph Seep Purchasing Agency announced cuts ranging from 15 to 35 cents on Eastern States crude.

Current Postings

EASTERN STATES

	Apr. 24 1925	Apr. 24 1924
New York Transit	$3.40	$4.50
Bradford (Pa.)	3.40	4.50
Gaines	3.15	...
Other Pa. Grades	3.55	4.00
Cabel	2.05	2.20
Ragland	1.30	1.10
Corning	2.10	2.15
Somerset, medium	2.15	2.30
Somerset, light	2.30	2.30

CENTRAL STATES

Illinois	$2.02	$2.0
Idniana	2.03	2.08
North Lima	2.23	2.28
South Lima	2.23	2.28
Plymouth	1.55	1.45
Princeton	2.02	2.07
Waterloo	1.10	1.55
Wooster	2.15	2.15

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	2.05	...
33 to 35.9	1.95	...
32.9 and below	1.85	...

CALIFORNIA

(Crude oil prices at well)

Los Angeles and Orange Counties

14 to 19.9 gravity	$1.25	$1.00
20 to 20.9 gravity	1.27	1.01
21 to 21.9 gravity	1.30	1.02
22 to 22.9 gravity	1.33	1.03
23 to 23.9 gravity	1.36	1.05
24 to 24.9 gravity	1.40	1.07
25 to 25.9 gravity	1.44	1.10
26 to 26.9 gravity	1.48	1.13
27 to 27.9 gravity	1.52	1.16
28 to 28.9 gravity	1.56	1.19
29 to 29.9 gravity	1.60	1.22
30 to 30.9 gravity	1.64	1.25
31 to 31.9 gravity	1.68	1.28
32 to 32.9 gravity	1.72	1.31
33 to 33.9 gravity	1.76	1.34
34 to 34.9 gravity	1.80	1.40
35 gravity and above	1.85	1.40
Fuel Oil	1.65	...

Rosecrans Field

36 to 36.9 gravity	$1.92
37 to 37.9 gravity	2.00
38 to 38.9 gravity	2.08
39 to 39.9 gravity	2.16
40 to 40.9 gravity	2.24
41 to 41.9 gravity	2.32
42 and above	2.40

MID-CONTINENT

(Prairie Prices)

Below 30 gravity	1.35	$ ...
30 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	2.00	...
39 to 41.9 gravity	2.25	...
42 and above	2.35	...

	Apr. 24 1925	Apr. 24 1924
(Sinclair Prices)		
Below 30 gravity	1.35	...
30 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	1.95	...
39 to 41.5 gravity	2.25	...
41.6 and above	2.35	...
(Texas Company Prices)		
Below 30 gravity	1.35	...
30 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	2.00	...
39 to 41.5 gravity	2.25	...
42 and above	2.35	...
(Magnolia Petroleum Co.)		
Under 28 gravity	1.00	...
28 to 30.9 gravity	1.35	...
31 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	2.00	...
39 to 41.9 gravity	2.25	...
42 and above	2.35	...
Corsicana, light	2.00	...
Corsicana, heavy	1.00	...
Mexia	2.00	...
Thrall	1.00	...
Wortham	2.00	...

NORTH CENTRAL TEXAS

(Humble Oil & Refining Co.)

Corsicana, light (Powell)	2.00	2.00
Mexia	2.00	2.00
Currie	2.00	2.00
Richland	2.00	...
Wortham	2.00	...

RANGER

(Humble Oil & Ref. Co.)

30 and below	$1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 to 38.9	2.00	...
39 to 41.9	2.25	...
42 and above	2.35	...

WICHITA AND ARCHER COUNTIES

(Texas)

(Humble Oil & Ref. Co.)

30 and below	1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 to 38.9	2.00	...
39 to 41.9	2.25	...
42 and above	2.35	...
Moran Crude		
30 and below	1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 and above	2.00	...

SOUTH TEXAS

Mirando (Texpata)	1.00	.80
Mirando (Magnolia)	1.00	...

SOMERSET

(Grayburg Pipe Line Company)

30 and below	1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 to 38.9	2.00	...
39 to 41.9	2.25	...
42 and above	2.35	...

GULF COAST

Grade "A"	1.75	2.00
Grade "B" at Blue Ridge, Hull and Pierce Junction	1.50	1.70
Big Lake (Reagan County)		
36 to 38.9	$2.00	...
39 and above	2.25	...

LULING

Based on Contract	1.15	...
Lockhart	2.00	...

	Apr. 24 1925	Apr. 24 1924
LOUISIANA-ARKANSAS		
Caddo		
38 gravity and above	2.05	...
35 to 37.9 gravity	1.95	...
32 to 34.9 gravity	1.85	...
Below 32 gravity	1.70	...
Homer		
35 gravity and above	1.80	...
33 to 34.9 gravity	1.70	...
31 to 32.9 gravity	1.60	...
Below 31 gravity	1.45	...
COTTON VALLEY		
All grades	1.00	...
Haynesville		
33 gravity and above	1.70	...
Below 33 gravity	1.60	...
Bull Bayou		
38 gravity and above	1.85	1.80
35 gravity to 37.9	1.70	1.65
32 to 34.9 gravity	1.55	1.50
De Soto crude	1.90	1.85
Crichton	1.70	1.65
Bellevue	2.00	1.75
Jennings	2.00	2.00
Vinton	2.00	2.00
Edgerly crude	2.00	1.80
Smackover		
Louisiana, Atlantic, Shreveport-Eldorado		
28 and above	1.45	...
27 to 27.9	1.30	...
26 to 26.9	1.25	...
25 to 25.9	1.20	...
24 to 24.9	1.10	...
Below 24	40	...
The Texas Company		
26 gravity and above	1.30	...
24 to 25.9	1.00	...
Below 24	.40	...
Standard Gulf		
27 and above	1.30	...
26 to 26.9	1.25	...
25 to 25.9	1.20	...
24 to 24.9	1.10	...
Below 24	.60*	...
Below 24	.40†	...
El Dorado		
33 gravity and above	1.70	...
Below 33 gravity	1.60	...
East Field (Calion)	.40	...
Stephens District		
26 gravity and above	1.60	...
Below 26 gravity	1.40	...
WYOMING-MONTANA		
Wyoming		
Byron	2.10	...
Ferris	1.30	...
Elk Basin	2.15	1.95
Grass Creek	2.15	1.95
Rock Creek	2.00	1.70
Lost Soldier	1.28	...
Lance Creek	2.15	1.90
Mule Creek	1.50	1.10
Notches	.65	...
Big Muddy	2.00	1.50
Salt Creek	2.00	1.60
Osage	2.15	1.75
Hamilton Dome	2.00	1.40
Pilot Butte	1.35	1.10
Torchlight-Greybull	2.00	1.95
Lander	.70	.70
Montana		
Sunburst	1.40	1.05
Cat Creek	2.15	1.80
NEW MEXICO		
Hogback	2.20	...
CANADIAN CRUDE		
Oil Springs	2.70	2.75
Petrolia	2.63	2.68

*Standard pays 60c per barrel for oil it can ship.

†Standard pays 40c per barrel for oil it has to store.

THE LOCATION of dealers who feature Sinclair Oils makes no difference in the closeness of the contact between us—a contact closer than is usual between buyer and seller.

Sinclair dealers are never without Sinclair service and co-operation. Sinclair recognizes and fulfills its obligations to the dealer.

SINCLAIR REFINING COMPANY

NEW YORK
Sinclair Oil Bldg., 45 Nassau St.
Telephone: Rector 9320

CHICAGO
22nd and Rockwell Streets
Telephone: Crawford 2000

Cable Address: "Lucent"

SINCLAIR OILS

Texas Company Buying Producing Properties

Houston, Texas, April 20.—The Texas Company has been more active than any single major company in the state since the first of the year in buying producing properties and storage oil in the high gravity fields, and the total consideration involved in the transactions amounts to approximately five and one-half million dollars. Last week The Texas Company purchased two separte producing properties in the Callahan County shallow field for $600,000 cash, while last January the Kirby Petroleum Company's properties at Wortham were acquired for $750,000 cash and $250,000 in oil, and the jointly owned properties of Panhandle Refining Company and the Consolidated Oil Company in Archer County were bought for $1,000,000 cash and $500,000 in oil. The Texas Company recently bought more than 500,000 barrels of Corsicana-Powell storage oil at the posted price and the steel tankage from the Tidal Oil Company, and approximately 700,000 barrels of spot crude and storage oil in the Wichita Falls district from producers and independent refiners.

Although the Texas Pipe Line Company has been buying virtually all the crude produced in Callahan County since the shallow pools were discovered some years ago, The Texas Company did not join the ranks of the producers in this prolific shallow area until last week. The properties of John Hooser of Dallas were purchased for $375,000 cash, and Duffy and associates for $225,000 cash. The Hooser property consists of 40 acres on the J. T. Davis farm in the south half of section 4, Bayland Orphan Asylum survey, with 18 pumpers from 500 foot level making 700 barrels daily. This 40 acre lease was purchased by Hooser about six weeks ago from L. A. Warren and the Reiter-Foster Oil Corporation for $210,000 cash with six wells making 600 barrels daily. Fourteen wells pumping from the 500 foot sand on the Wm. Isenhower 20 acre lease in north half section 7, Orphan lands, and the J. T. Davis 20 acre lease in the south half of section 4, Orphan lands, with a combined daily average of 450 barrels, were sold by Duffey and others to The Texas Company.

Mid-Continent Scouts to Meet During Petroleum Exposition

Tulsa, Okla., April 20.—Plans have just been completed for the Mid-Continent Oil Scouts Association to become a permanent organization. At a meeting held in this city during the past week chief scouts from the various companies highly endorsed the plan of having an annual meeting of the scouts at the International Petroleum Exposition which is held in this city in October of each year.

The executive committee which has been appointed by the president, C. C. Hilderbrand, includes James Buckley, Henry Langspect, Phil Doolen and C. E. Savage of Tulsa, Don Connelly of Bristow and V. R. Crouch and T. C. Wilman of Okmulgee.

The executive committee comprised of the following chief scouts will meet on September 5 to select the date of the meeting during the exposition: Harry L. Norris, Prairie Oil and Gas Company; Sam L. Martin, The Texas Company; R. C. Steinman, Sinclair Crude Oil Purchasing Company; A. M. Blow, Amerada Petroleum Corporation; George H. Lang, Carter Oil Company; H. J. Lawler, Skelly Oil Company; W. R. Whalley, Gypsy Oil Company; James Buckley, Twin States Oil Company; James Scarborough, Mid-Continent Petroleum Corporation; W. R. Bradley, Mid-Kansas Oil and Gas Company; Lou Curry, Shaffer Oil and Refining Company; D. Gibson, Dixie Oil Company; E. H. Daley, Papoose Oil Company; E. A. Bacon, Roxana Petroleum Corporation; H. M. Mauldon, Pure Oil Company; C. D. Watson, Carter Oil Company; E. R. Parsons, Marland Oil Company; J. E. Sanders, Wentz Oil Corporation, and Paul McIntyre.

Nowata, Okla., April 21.—The Jensen Manufacturing Company of this place, manufacturers of the Jensen straight lift pumping jack now in use in the oil fields of this country, have just recently completed a shipment to the Baku fields in Russia. The jack is of substantial build and design and is in extensive use.

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Roxana-North American Properties to Be Sold

Wichita Falls, Texas, April 21.—Properties held jointly by the Roxana Petroleum Corporation and the North American Refining Corporation in the South Bend field of Young County must be sold at a private or public sale, according to a decision of the United States district court at Wichita Falls.

The holdings comprise about 3600 acres of proven leases in the field, with 24 producing oil wells, one gas well and a large amount of personal property, including powers, portable tools, well equipment, water pumping plant, water and oil pipe lines, etc.

Attorney W. H. Sanford of Wichita Falls has been appointed master commissioner of the sale. The court's order provides that the sale shall be made and reported by June 10, 1925.

Mexican Railways Well Runs Wild, Bridged Over

Tampico, Tamps., April 18.—The outstanding feature for the week ending April 11, was the completion of Well No. 12 Chapacao, of the National Railways, by Jas. F. Martin and Company, together with its subsequent running wild as results of the valve blowing off and its later being brought under control, only to find that the well was partially bridged. The well had been turned over to the Railways by the contractors on Tuesday, April 7, and at seven o'clock that night was opened in an endeavor to gauge production. Enormous gas pressure had built up and the control valve was blown off allowing the well to run wild. Subsequently, however, the well bridged to such an extent that it was comparatively easy to run on a die nipple and a new control valve. The rig is being repaired and tools will be run again in an endeavor to clean out the hole.

This well was one of the 14 completions during the week with 11 new wells spudded. Seven of the completions were dry holes; one non-commercial and the balance good for an estimated 24,255 barrels initial capacity. Of these completions five were by the Mexican Seaboard, the only commercial completion being well No. 161, Cacalilao, on April 10, for 8000 barrels at a depth of 2070 feet. This well is on the northeastern Cacalilao line and opens up considerably new territory for this district. The nearest possible competitive offset is 360 meters away in Chapacao and is owned by the Mexican Petroleum Corporation (Doheny).

Of the total completions six were in Cacalilao; three in Chapacao and one each in Rufino, La Dicha, Caracol and Limon by the English Oil Company, Mexican Petroleum, Sinclair, National Railways, Transcontinental and Venable S. on C.

The Corona, Cosmos, Mexican Seaboard, Mexican Gulf, Mexican Petroleum, Sinclair and Transcontinental were those spudding in. Of the new operations, five were in Cacalilao, four in Corcovado and one each in Chapacao and Paciencia.

Panuco, Ver., April 18.—The East Coast Oil Company (Southern Pacific Railroad) has completed its well No. 447, Ingenio, for an estimated initial daily production of 5000 barrels at a depth of 1792 feet. This well is an offset of No. 5 Tananturo, which the Mexican Sinclair Oil Corporation recently brought in and which is flowing 7500 barrels daily and which has produced 590,000 barrels of oil to date. The East Coast producer is approximately 200 meters to the north of the Sinclair discovery well in this pool.

Burton W. Hink, representative of the Standard Oil Company of Indiana, with headquarters at Tulsa, spent the past week on a tour of inspection of active fields in Arkansas, Louisiana and North Texas.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Product'n This Week	Initial Product'n Last Week
Oklahoma	98	120	69	71	13	9	16	40	23,254	21,533
Kansas	40	32	33	22	..	1	7	9	5,480	3,245
Texas	128	154	75	98	7	9	46	47	29,893	35,820
Arkansas	46	35	38	27	3	..	5	8	84,235	101,290
Louisiana	13	12	10	8	2	1	1	3	2,515	1,325
Eastern States	163	172	112	86	22	52	29	34	1,298	1,344
Mountain States	9	8	6	7	..	..	3	1	2,715	1,800
California	11	11	9	11	..	..	2	..	4,325	4,460
Totals	508	544	352	330	47	72	109	142	153,715	170,817

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Texas

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Crosslin-Loper & Atlantic Oil Prod. Co. P. Kreiter 1	*	1614
Fisher-Gilliland et al Rogers 4	130	1350
Wirt Franklin et al W. F. Parrish 6-B	90	1554
Gulf Production Co. J. F. Rogers 6	*	1344
A. P. Nichols 12	95	1553
J. M. Kunkel 3	65	1169
J. M. Kunkel 4	25	1188
Magnolia Pet. Co. Vic Stamfli 5	*	1367
Vic Stampfli 6	50	1345
Kate Rogers 9	50	1331
McKnight & Gwynn et al O'Donnell 1	20	1286
Phillips Petroleum Co. J. H. White 23	20	1602
Waite Phillips Co. T. B. Wilson 1	130	1719
Richardson Bros. et al C. F. Boone 1	*	1859
Riner-Bailey et al L. F. Wilson 12-B	150	1621
Shaw-Rathke et al M. E. Rogers 2	110	1278
Sun Oil Co. C. E. Graham 1	*	1225
W. R. Farmer 9	*	1525
Texhoma Oil & Ref. Co. L. F. Wilson 5-C	*	1638
A. T. Wolfe & Son Chilson 3	130	1805
Woodburn (Simms) Oil Corp. L. F. Wilson 16-A	*	1810

K-M-A AND IOWA PARK

Company, Well and Location	Initial Production Bbls.	Depth
E. J. Fisher et al Barker 11	5	751
H. A. Waller et al Waller 1, dd	*	2222
Leath & Warren Fassett 1	*	1885

EASTLAND COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
El Dorado Oil & Gas Co. Beard 1.	*	3744

YOUNG COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Gulf Prod. Co. W. E. Gambrell 2	*	1382
G. B. Hamilton 1-D	155	1204
Jensen Oil Co. Vernon 1	*	1305
Lee Wilson et al Logan 1	*	1078

ELECTRA

Company, Well and Location	Initial Production Bbls.	Depth
M. Burkland et al Burnett 5	*	1600
Dale Oil Corp. Jennings 9	45	1470
Gulf Prod. Co. Jennings 11	*	2010
Jennings 12	60	1523
B. A. Hampton et al Fisher 1	*	1345
Joe Howell et al Burnett 5	*	1992
Ryan Pet. Co. G. E. Nance 28	50	1306
G. E. Nance 31	55	1320
G. E. Nance 32	85	1332

STEPHENS COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Head et al Post 1	†	3285
Landreth Prod. Corp. Gantz 2	¶2½	2892
Pender Prod. Co. Davis 2	10	3342
States Oil Corp. Boles 2	*	3765
Texas Pacific Coal & Oil Co. Adams 6	150	2230
The Texas Co. Keathley 11	85	2460

SOUTH VERNON (Wilbarger County)

Company, Well and Location	Initial Production Bbls.	Depth
Continental Oil Co. Zipperle 2	40	1825
Humble Oil & Ref. Co. Stephens 18	†	626
C. F. Kolp et al Waggoner 6	¶3	1220
McCamey-Sherrin & Lucey Stephens 14	60	1337
W. M. Priddy et al Castleberry 2.	*	1353
Staley-Wynne et al Stephens 4	30	1307
Stephens 5	¶2½	1310
Stephens 6	40	1305

NORTH TEXAS

Powell—

Gulf Prod. Co.'s No. 7 Ruby Smith	30	1648
Humble O. & R. Co.'s No. 32 Humphreys	*	1697
No. 7 Kent	25	1652
No. 19 Irvine "C"	20	1650
No. 16 Kent	20	1650
No. 1 W. Smith	25	1650
Pure Oil Co.'s No. 14 Kent	18	1653
Roxana Pet. Co.'s No. 1 Smith	40	1645
No. 2 Smith	50	1650
Simms Oil Co.'s No. 1 Smith	*	3050

Currie—

McDonald Bros.' No. 1 McClelland	*	3210
Ben Strotman & Smith's No. 1 Bounds	*	3105

Groesbeck District—

Magnolia Pet. Co.'s No. 1 Stroud	¶	2912
J. R. Stroud et al's No. 1 Stroud	¶	2985

Wortham—

Navarro Oil Co.'s No. 7 Jackson	125	3017
Humble O. & R. Co.'s No. 14 Ella Dodd	1000	3030
No. 13 Ella Dodd	100	3030
No. 18 Ella Dodd	800	3025
No. 6 Lindley "B"	250	3000
Pure Oil Co.'s No. 13 Boyd	110	3020
McKinley & Dibble's No. 1 Peurifoy	*	3053

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth

Edgerly—

Gulf Refining Co. of Louisiana's No. 32 Bright-Penn, wo	600	3187

COASTAL COMPLETIONS

Spindle Top—

Baker Oil Co.'s No. 13 Tremble	*	955
Eddy Oil Co.'s No. 7 Lone Acre	100	835

Goose Creek—

Gulf Prod. Co.'s No. 10 C. Gaillard "A", wo	25	2930
No. 5 Paddock Smith, wo	250	1860
No. 32 Gaillard	100	2775

Sour Lake—

Humble O. & R. Co.'s No. 23 Hebert	25	2290
T. G. Barcley Oil Co.'s No. 3 Rogers	*	825
J. S. Jackson Trustee's No. 13 Carpenter	*	900
Gulf Prod. Co.'s No. 37 Tarver-Hardin	*	2375

Hull—

Humble Oil & Ref. Co.'s No. 16 Guedry, wo	75	3050
Republic Prod. Co.'s No. 109 Dolbear	100	2520
No. 110 Dolbear	150	1835
No. 111 Dolbear	1000	2360
No. 112 Dolbear	2500	1682
Gulf Prod. Co.'s No. 40 Phoenix	250	3240

South Liberty—

Mills Bennett's No. 8 Pickett	400	3540
Humble Oil & Ref. Co.'s No. 2 Pickett "B"	*	1412
Bashara Oil Co.'s No. 2 Pickett	1200	3537
The Sun Co.'s No. 1 Schade	1600	3422
F. M. Long's No. 1 Andrews, wo	300	3680

Company, Well and Location	Initial Production Bbls.	Depth
Gulf Prod. Co.'s No. 1 Orgain	*	3700
No. 2 John Hamman	275	3450
Abercrombie No. 2	500	3590
Peer Oil Co.'s No. 4 Harrison	1000	3490

West Columbia—

Humble Oil & Ref. Co.'s No. 11 T. & W.	15	370

Blue Ridge—

Gulf Prod. Co.'s No. 3 Invincible Oil Co.	400	2645

Orange—

Gulf Production Co.'s No. 17 Lee Hager Fee	315	3500
No. 40 Chesson "A"	125	4715
Humble Oil & Ref. Co.'s No. 9 Chesson "B" (wo)	*	4520
No. 10 Chesson (wo)	350	4740
Edgerly Pet. Co.'s No. 2 Carbello (wo)	20	3308
Sinclair Oil & Gas Co.'s No. 4 Granger (wo)	7	3305
Gulf Prod. Co.'s No. 1 Mose Granger	750	4450
No. 2 Granger et al	2200	4500

TEXAS MISCELLANEOUS

Luling—

United North & South Oil Co.'s No. 9 Hardeman	200	....

Lockhart—

Gulf Prod. Co.'s No. 2 Beatty	1500	....
Mid-Kansas Oil & Gas Co.'s No. 1 Brewer	500	....

EAST TEXAS

Waskom Gas Field, Harrison County—

Deas & Williams Synd.'s Armstrong 1, Reynolds Headright survey	*	2010
Ferguson & Fuller's Bryson 1, Wilson Headright survey	*	1016
Gray 1, Jenkins Headright survey	¶10	1960
Total, 3 wells	¶10	

Mountain States

WYOMING

Salt Creek Field—

Wyoming Associated Oil Co.'s:		
No. 31A, SW¼ 19-40-78	50	2073
No. 36A, NE¼ 42-40-79	50	2020
No. 6A NW¼ 30-40-78	700	1965
No. 13 A SW¼ 30-40-78	65	2155

Lost Soldier Field—

Producers & Refiners Corp.'s No. 6, 11-26-90	1400	2186

MONTANA

Kevin-Sunburst Field—

Queen City Oil Co.'s No. 9, 4-34-2	450	1470
Williams et al's No. 1, SE¼ 34-35-2	*	....

COLORADO

Beaver Creek Structure—

Transcontinental Oil Co.'s No. 1, 32-4-89	*	3700

Florence Field—

McCormack et al	*	3999

California

Inglewood—

Standard's L. A. Investment 1-4	650	2211
Petroleum Securities' Cone 2	300	1737
Cone 3	400	1793
Associated's Vickers 1	275	2809

Huntington Beach—

Associated's Miley Keck 1, wo	400	3430

Rosecrans—

Barnsdall's O'Dea 2, wo	1600	4218

Hovey Hills—

Richmond Midway's No. 1, sec 35-31-23	400	4030

Midway—

Midlands Oilfields' No. 17, sec 24-31-23-	400	4030

South Kern River—

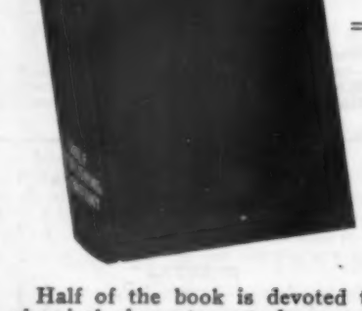
Marland's Cauley 23	100	2660

Cat Canyon—

Brooks Oil Co.'s No. 5	200	2870

Tulare County—

Hub Oil Co.'s Ducor 1	*	1623



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Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
Eldorado, East Field—		
Jones & Grimes' Van Hook 8, 7-18-14	50	2195
Smackover Field, Ouachita County—		
H. E. Clark's Yarbrough 3, 26-15-17	45	2324
Cumberland Pet. Co.'s Elliott 1, 23-15-17	25	2297
Eberhart et al's Gibson 2, 27-15-17	30	2347
El Dorado Union Oil Co.'s LaGrone 1, 36-15-17	40	2372
Gulf Ref. Co.'s Bennett 3, 33-15-15	1200	2382
Burkett 1, 7-16-16	*	3018
Goodwin 6, 32-15-15	3000	2382
Murphy 13, 4-16-15	6800	2362
Reynolds 5, 23-15-17	*	2410
Werner A-14, 36-15-17	40	2397
Humble Oil & Ref. Co.'s:		
Berg B-2, 30-15-15	30	2020
Flenniken 5, 6-16-15	2500	2387
Umstead 6, 5-16-15	1000	2395
Umstead 7, 5-16-15	1200	2365
H. L. Hunt et al's Myatt A-7, 22-15-17	35	2404
Louisiana Oil Ref. Corp.'s Myatt 1, 22-15-17	40	2335
Myatt 2, 22-15-17	35	2405
Marine Oil Co.'s Hays 5, 4-16-15	¶40-7500	2327
Standard Oil Co.'s Umstead 13, 33-15-15	¶40	2350
Whittaker et al's Green 3, 23-15-17	45	2360
Smackover Field, Union County—		
Arkansas Fuel Oil Co.'s Ferguson 4, 6-16-15	*	2405
Barnesdale & Foster's Murphy 4, 17-16-15	*	2499
Clark & Melat's Murphy 1, 4-16-15	1000	2345
Sam Cook et al's Murphy 1, 9-16-15	3000	2486
Crawford & Sebastian's Graves 6, 3-16-15	1500	2382
Crusader Oil Producing Co.'s Graves 5, 3-16-15	700	2399
Hickman et al's Graves 9, 3-16-15	1500	2387
Humble Oil and Ref. Co.'s:		
Flenniken B-2, 9-16-15	900	2472
Pate 7, 10-16-15	1500	2380
Houston Oil Co.'s Milner 5, 3-16-15	4000	2395
Imperial Oil & Gas Co.'s Murphy 6, 9-16-15	10,000	2457
Lyall et al's Fee 7, 3-16-15	2500	2380
Mazda Oil Co.'s Lawton 1, 10-16-15	2500	2450
O. G. Murphy's T. C. Murphy 1, 9-16-15	4000	2464
Natural Gas & Pet. Co.'s Murphy F1, 9-16-15	500	2464
Murphy F-2, 9-16-15	400	2494
Ohio Oil Co.'s Murphy 3, 9-16-15	6000	2409
Ramage et al's Lawton C-4, 10-16-15	900	2387
James 7, 6-16-15	*	2400
Simms Oil Co.'s Cook 4, 16-16-15	¶30	2363
Sunny Jim Oil Co.'s Flenniken 4, 9-16-15	7000	2502
Fleniken 5, 9-16-15	1500	2502
Standard Oil Co.'s Alphin 17, 2-16-15	70	2005
The Texas Co.'s Graves 8, 3-16-15	10,000	2392
Woodley Pet. Co.'s Umstead 3, 4-16-15	1200	2357
Total, 45 wells	¶70	84,235

Louisiana

Company, Well and Location	Initial Production Bbls.	Depth
Bellevue Field—		
Humble Oil & Ref. Co.'s Bliss & Weatherbee B-4, 14-19-11	15	385
Caddo Parish—		
Proven Prod. Co.'s Agurs 1, 6-16-16	25	2716
Cotton Valley Field—		
Alabama Pet Co.'s Pardee B-3, 24-21-10	200	2517
Crusader Oil Co.'s Hope B-15, 25-21-10	900	2520
Humble Oil & Ref. Co.'s Bodcau Lumber Co. 14, 12-21-10	125	2515
Louisiana Oil Ref. Corp.'s Crichton 2, 21-21-10	75	2545
Ohio Oil Co.'s Bodcau Lumber Co. 18, 13-21-10	200	2500
Gray 4, 26-21-10	150	2555
Gray 7, 26-21-10	150	2555
Sidney 3, 16-21-10	100	2535
Total, 8 wells	1900	

Company, Well and Location	Initial Production Bbls.	Depth
Shongaloo Gas Field—		
Simms Oil Co.'s Burrell 1, 34-23-10	¶50	2640

Oklahoma

Company, Well and Location	Initial Production Bbls.	Depth
Burbank Field—		
Skelly Oil Co.'s No. 2 C S L SW SW SW 2-27-5	30	3018
No. 1, SWc 2-27-5	10	3000
Phillips Pet. Co. No. 11, C SW NE NE 11-27-5	250	2968
No. 10, C SE NW NE 11-27-5	250	3087
No. 8, C E L NE SE NE 11-27-5	250	2999
No. 7, C NW SE NE 11-27-5	300	3036
No. 6, C NE SW NE 11-27-15	600	3104
No. 3, C S L SE SE NE 11-27-5	600	3036
Sinclair O. & G. Co.'s No. 3, C SE SE NE 1-26-5	*	2908
Carter Oil Co.'s No. 7, SWc NE NW 9-26-6	*	2796
Roxana Pet. Co.'s No. 2, C S L SE SW SW 4-26-6	*	2787
Carter Oil Co.'s No. 3, SEc 31-27-6	*	2934
Phillips Pet. Co.'s No. 5, C W L NW SW SW 12-27-5	700	3033
Caddo County—		
Briscoe & Hall's No. 3 Culp, NEc NW NE 1-5-10w	60	2362
Carter County—		
Amerada Pet. Corp.'s No. 4 Fish, NWc NE SE 28-5s-1w	*	1540
No. 9 Clay, C E L NE SW NE 28-5s-1w	80	1060
Tidal Oil Co.'s No. 1 Morgan, C SE SE NW 28-1s-3w	50	3451
Schemerhorn Pet. Co.'s No. 4 McGill, S CW SE SE 8-3s-2w	40	3322
No. 4 Dickerson, C W L SW NW SE 5-3s-2w	20	3250
Sutherland Oil Co.'s No. 4 Poland, C NE NW NW 5-3s-2w	40	2930
Magnolia Pet. Co.'s No. 5 Williams, C SW SW NE 23-2s-3w	15	1832

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Los Angeles, California

336 Humble Building
Houston, Texas

Company, Well and Location	Initial Production Bbls.	Depth
No. 4 Hart, C NW NE SW 34-1s-3w	35	3319
Westheimer & Daube's No. 1 Newstadt, C SW SW SW 27-1s-3w	20	3215
Magnolia Pet. Co.'s No. 1 Hardin, C SW SW SE 18-1s-3w	130	3145
Cleveland County—		
Garr Oil Co.'s No. 1 Duck, C NE NE SE 21-10-4w	*	2550
Creek County—		
Jomac Oil Co.'s No. 2 Timpothy, NWc NE NE 1-16-8	20	2810
Twin State's No. 1 Jackson, SWc 22-14-9	*	3149
C. G. Tibbin's No. 7, C S L NE SW 30-15-9	1000	3036
Skelly & Billingsley's No. 3 Fields, NWc SE SW 36-15-9	150	3066
Carter Oil Co.'s No. 1 Smith, C N L NW SE NE 29-15-9	*	3691
Phillips Pet. Co.'s No. 2 McIntosh, NWc SW NE 24-14-9	*	3150
Waite Phillips' No. 4 Grayson, SWc NE NE 23-17-8	*	3134
Cortez Oil Co.'s No. 6 Wilson, NWc SE NW 22-16-8	300	3147
Sinclair O. & G. Co.'s No. 8 Brunner, SEc NE SE 33-17-7	*	1475
Commanche County—		
Winkler et al's No. 1 Coffert, C NE NE SE 26-1n-9w	*	2350
Garfield County—		
Sinclair O. & G. Co.'s No. 25 Belveal, C NE NE NE 24-22-4w	2600	2600
No. 1, SEc NE 13-22-4w	198	2331
No. 14 Kisner, NEc NW NE 19-22-3w	40	2200
Roxana Pet. Co.'s No. 7, SWc NW SW 18-22-3w	750	2335
Grady County—		
Frates et al's No. 1 Sweeney, C NW SW 30-2-6w	*	3037
Briscoe & Neilson's No. 1 Dryden, C SE SW 2-4n-8w	¶	1427
Sultan et al's No. 1 Bennett, SWc SW SE 15-5n-7w	¶	2021
Nichols O. & D. Co.'s No. 3 Chandler, SEc NW SW 26-5n-8w	¶	2504
Cotton Patch Oil Co.'s No. 1 Moore, NEc SW NW 14-5n-8w	¶	3217
Hughes County—		
Independent O. & G. Co.'s No. 6 Alex, C NE SE NE 2-9-9	125	3378
Kay County—		
Comar Oil Co.'s No. 19 W. Clements, NWc NE NW 34-25-1w	1138	4180
The Texas Co.'s No. 4 Gilbert, C SW SE SW 27-25-1w	1619	4210
Comar Oil Co.'s No. 2 Duncan, SEc NE SW 21-29-1w	247	1930
Lincoln County—		
Magnolia Pet. Co.'s No. 1, C SW NW NE 3-14-5	624	3456
Noble County—		
Bu-Vi-Bar Oil Co.'s No. 1, C SW SW 15-21-2w	150	1912
Marland Oil Co.'s No. 5 North, NWc NE NE 12-26-2w	710	2549
Prairie O. & G. Co.'s No. 2, NEc NW SE 1-26-2w	810	2537
No. 1, NWc NW SE 1-26-2w	315	2543
Comar Oil Co.'s No. 15W Blubaugh, SEc NE SW 2-24-1w	841	4255
Magnolia Pet. Co.'s No. 2 Ely, C NW NW SE 4-22-3w	*	4127
Watchorn O. & G. Co.'s No. 7, C SE SE SW 33-23-3	100	4144
Okfuskee County—		
Amerada & Gilcrease's No. 2 Harjo, C NW SW SW 36-10-9	585	3378
Okmulgee County—		
C. E. Campbell's No. 2 Sampson, NEc SW SW 30-13-15	¶	720
Osage County (outside Burbank)—		
Twin States' No. 11, C E½ NE SW 32-22-10	15	1799
C. B. Peters' No. 4, C S L SW SE SE 12-23-8	54	2102
Owen Osage O. & G. Co.'s No. 320, C S L SE NW NE 32-24-12	¶	1817
45 Oil Co.'s No. 38, C E L SE NE NW 5-25-12	60	1687
Olean Pet. Co.'s No. 4, C S L SE NW SE 19-25-9	60	2299
Owen Osage O. & G. Co.'s No. 321, C E L SW 10-27-11	¶	1904
No. 322, NWc SW SE 8-27-11	¶	685
Ramsey Oil Co.'s No. 1, C W L NW NW 27-28-11	*	1823
Adamson et al's No. 1, SEc SW SW 32-21-8	7	2572
Pawnee County—		
Superior Oil Co.'s No. 1 Gillespie, SWc NW NE 9-20-7	¶	2600
Bement Oil Co.'s No. 1 Box, SEc SE 30-23-5	675	3762
Seminole County—		
Holm & Jarvis' No. 1 Hull, C NE SE NE 7-9-8	120	3302
White Eagle O. & R. Co.'s No. 1 Curley, C SW NE SW 14-10-8	175	3531
Southwestern Pet. Co.'s No. 6a Wisner, C NW SE NE 4-10-8	450	3481
Prairie O. & G. Co.'s No. 1 Hill, C SW SW NE 3-10-8	510	3433
Carter Oil Co.'s No. 9, C NW NW NW 3-10-8	1274	3382
Sinclair-Gardner's No. 5 Hill, C SW NW SW 34-11-8	776	3390
Phillips & Cosden's No. 2 Brown, C NE NE SW 33-11-8	420	3438
Sinclair O. & G. Co.'s No. 5 Pierce, C NW NE SE 33-11-8	1080	3417
Carter et al's No. 1 Williams, C SE SW NW 33-11-8	516	3452
Magnolia Pet. Co.'s No. 1 Carolina, C NE NE SE 15-8-7	70	3191
Stephens County—		
Wm. Priddy's No. 2, C N L NE NE SE 26-1n-9w	¶	1939
No. 1 Coffert, NEc SE 26-1n-9w	¶	1946
Magnolia Pet. Co.'s No. 5 Greene, NEc SW SW 30-1-8w	30	2020
No. 3 Marx, C NW NE SE 13-2s-8w	*	3490
Tulsa County—		
Nowata O. & G. Co.'s No. 2a, NEc SE 30-19-12	¶	1989
Brooks Drlg. Co.'s No. 4 Colbert, NEc SW SW 29-19-12	¶	855
Sanders et al's No. 1a Deane, SWc NW SE 27-19-12	*	2243
Riverland Oil Co.'s No. 16, NEc 34-19-11	1060	2273
Sand Springs Home's No. 7 Berryhill, C E L SE NW 5-19-12	25	1970
Simmons Oil Co.'s No. 3a Patridge SWc NE NW 4-19-12	75	2090

Kansas

Company, Well and Location	Initial Production Bbls.	Depth
Cowley County—		
Marland Oil Co.'s No. 1, C SW SW NW 14-34-2	*	3650
Waite Phillips et al's No. 4, C NW NW NW 2-33-3	75	3264
W. Phillips et al's No. 3 Backus, C SW SW NW 2-33-3	100	3257
Marland Oil Co.'s No. 6, C NE SE NE 9-33-3	130	2554
Marland Oil Co.'s No. 1 Nevitt, NEc SW NW 30-32-3	*	3528
Hull & Emerald's No. 9 Kukuk, NWc SW NE 24-32-4	125	3054
The Texas Oil Co.'s No. 1 Staggers, C NE NW NE 13-32-3	*	3392
Greenwood County—		
Titus & Norris' No. 1 Prather, C NE NE NE 30-22-10	600	2449
Sinclair O. & G. Co.'s No. 12 Browning, C SW NW SW 20-22-10	250	2328
Skelly et al's No. 2, C NE NE NW 13-22-10	180	2202
Transcontinental's No. 3, C NE NE SW 2-23-9	150	2357
Murphy et al's No. 1 Green, C NE SW SW 2-23-9	300	2351
York State Oil Co.'s No. 13 De Malorie, C NW NW SE 32-22-11	500	1900
Federal Oil Co.'s No. 1 Klasser, SWc NW NE 7-22-11	*	2201
Rodgers et al's No. 12 Cartwright, C W L N WNW 6-24-10	100	2371
Transcontinental's No. 12 Olson, C N L SW SE 11-24-9	75	2179
Roth et al's No. 6 Cartwright, C E L NE NE 1-24-9	100	2343
Mid-Kansas O. & G. Co.'s No. 18, C W L SW SE 31-23-10	175	2363
No. 15, C NW NE SE 31-23-10	150	2348
Empire G. & F. Co.'s No. 3, C SE SW SW 29-23-10	50	2366
Mid-Kansas O. & G. Co.'s No. 13 Ladd, C SE NW SE 19-25-9	125	2442
No. 2 Allen, C NW NE SE 23-23-10	150	2130
Mission et al's No. 6 Thrall, C S½ SE 29-23-10	60	2357
Phillips Pet. Co.'s No. 3 Edwards, NW NE NE 7-23-11	25	2046
Great Southern's No. 23 Hull, C SW SW 2-26-8	50	2404
Mid-Kansas O. & G. Co.'s No. 12 Ladd, C N½ SE 19-25-9	140	2445
Jennings Bros.' No. 5 Greenwood, C NW SW NW 8-23-11	60	1933
York State Oil Co.'s No. 12, C NE NE SW 32-22-11	400	1994
Phillips Pet. Co.'s No. 8 Clark, C W L SW NE SE 28-22-11	*	2100
Fisher et al's No. 1, C NW SW NW 12-22-11	225	1830
Transcontinental's No. 7 Nuttle, C NW SE SW 2-23-9	200	2361
Skelly Oil Co.'s No. 1 Hartley, C SE SE NW 2-23-9	250	2355
Syndicate Oil Co.'s No. 3 Kipfer, C S L SE NE 13-22-10	*	2211
Syndicate Oil Co.'s No. 2 Kipfer, NWc SE NE 13-22-10	*	2050
Thete Oil Co.'s No. 2 Pixlee, C SE SE SW 8-22-10	120	2350
Greenland Oil Co.'s No. 1a, SEc NE NE 16-23-9	150	2416
Phillips Pet. Co.'s No. 4 Teeter, C NW SW NW 15-23-9	150	2412
McGinnie & Bottel's No. 6 Teeter, C SE NE NW 15-23-9	115	2377
Greenland Oil Co.'s No. 3 Nuttle, C SE NW SE 10-23-9	100	2363
No. 2 Nuttle, C NW SW SE 10-23-9	100	2388

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co. Pittinger 1	2	....
Bingham 554, tract 1	3	....
Redfield 95	2	....
Forest Oil Co. Bingham 368, tract 43	5	....
Noble 1	4	....
Parker Farm Oil Co. Clugston 11	8	....
Pressure Oil Co. Howard 3	6	....
Associated Prod. Co. Bingham 151	3	....
Hope Oil Co. Still 1	2	....
McDowell & Andrews Bingham 296, tract 97	2	....
J. L. Yerdan Bingham 1	5	....
A. E. Yahn Burns 1	4	....
S. H. Elder & Co. Vincent Heirs 1	4	....
T. H. Kennedy Co. Bingham 490, tract 128	5	....
L. G. Dana Dana 1	5	....
Johnson & Wright Wright 1	5	....
Gridiron Oil Co. Duke 2	4	....
C. E. Potter Irvine 1	3	....
C. B. Kervin Baldwin 1	3	....
Cooper & Simpson Galvin 1	3	....
C. L. Wann & Co. Bingham 370, tract 37	3	....

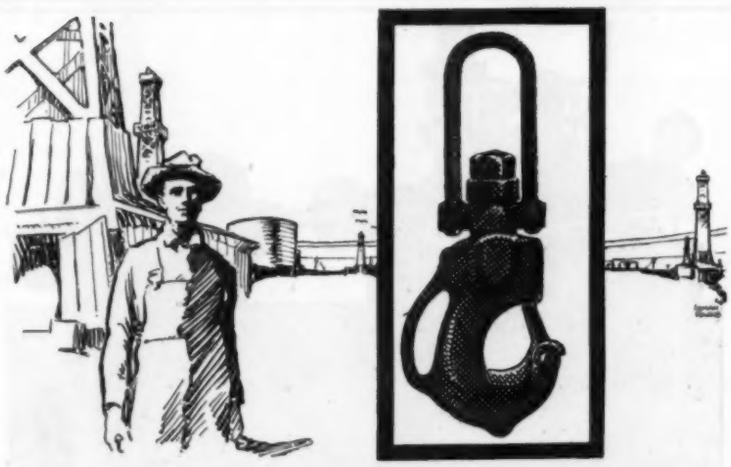
Company, Well and Location	Initial Production Bbls.	Depth
L. & F. Shippey Shippey 12	3	....
Harris Oil Co. Bingham 388, tract 1	3	....
J. Roggenkamp J. Roggenkamp 3	3	....
Denwood Oil Co. Garlock 1	3	....
Venango County—		
McCray & Berry Eanery 18	3	....
S. P. Calmont Estate Morrison 1	¶1	....
Hiffman & Kelley Sayers 9	3	....
C. B. Reeves Eakin 17	2	....
White & Corbett White 15	2	....
Frank Masterman Burkhardt 13	2	....
Hancox & Leadenham P. & B. Block 2	2	....
Kurtz & Flack Preston & Kapp 6	2	....
Butler County—		
Neff & Elliott Helm Heirs 2	3	....
S. Lobaugh & Co. Cookson 1	2	....
Shaffer & McCall A. G. Groll 1	¶2	....
Saxonburg Light & Heat Co. Wyle Heirs 2	¶2	....
Clarion County—		
T. B. Swartzfager Switzer 1	¶1	....
V. Glass Wentling 2	3	....
Lamberton & Phillips Gilmore 1	¶1	....
Southern Oil Co. Black 5	2	....
Green County—		
Manufacturers Light & Heat Co. Charles Behm 1	5	....
Carnegie Natural Gas Co. Lloyd Cassidy 1	*	....
Lee Wade 1	20	....
Center-Middle Field—		
South Penn Oil Co. lot 3664, tract 38	2	....
Rock Grove Oil Co. Bingham 12	2	....
S. M. Mack Mack 1	2	....
Kane Field—		
Fenner Bros, Bliss 1	¶	....
Allegany County—		
Martin O'Connor O'Connor 1	3	....
O. E. Crandall Crandall 1	3	....
C. W. Mead Mead 1	3	....
J. E. LeSuer & Co. LeSuer 1	3	....
L. W. Shaner & Co. Shaner 1	3	....
Wasson & Martin Bros. Wasson 1	2	....
A. C. A. Oil Corp. Fee 1	2	....
Howard & Phillips Howard 1	*	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
Wood County—		
Leeton & Zinn John Coplin 1	25	....
Stout Bros. W. S. Munchmyer 3	3	....
Carmichael & Rexroad C. Kruger 1	2	....
A. E. Cooper F. G. Mixer 3	3	....
Ritchie County—		
E. M. Treat Oil & Gas Co. W. J. Collins 15	¶¼	....
Penn Royal Oil Co. I. N. Jacobs 4	¶¼	....
Pittsburgh & West Virginia Gas Co. J. & R. Marsh 5	¶¼	....
Hope Natural Gas Co. W. V. Gill 1	¶2	....
Roane County—		
Federal Oil & Gas Co. Pell, Newman & Co. 16	¶¼	....
United Fuel Gas Co. Simmons 1	¶¼	....
Carter Oil Co. Craig-Bartlett 1	10	....
Mingo County—		
Public Gas Corp. Closterman 8	15	....
Closterman-Tate 14	20	....
Harrison County—		
South Penn Oil Co. J. T. Goodwin 10	10	3125
Grasselli Chem. Co. Shettleworth heirs 1	¶4	....
Marion County—		
South Penn Oil Co. E. A. Blackshere 20	5	3064
Carnegie Natural Gas Co. E. J. Flaherty 1	¶3½	....
Kanawha County—		
United Fuel Gas Co. W. A. Bradford 1	*	....
Hulings-Cobb 1	¶1	....
Wetzel County—		
Hope Construction & Refg. Co. Mary Cain 3	15	....
Calhoun County—		
Hope Construction & Ref. Co. Granville Rice 6	6	....
Marshall County—		
Wasmuth & Callahan Oil Co. Mary E. Reille 3	3	....
Gilmer County—		
Hope Natural Gas Co. Bennett 5	¶3	....
Lincoln County—		
Moore Rock Oil & Gas Co. J. Madden 3	¶1¼	....
Tyler County—		
Hope Construction & Ref. Co. Hannah Merritt 2	¶2	....
Lewis County—		
Ray Horner Mary V. Horner 1	*	....
Wirt County—		
W. C. Patterson C. E. Vanderveender 11	*	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
Barren County—		
Lew J. Emery, Jr., Sons Co.:		
John Wells 1	*	....
Cox 1	*	....
C. W. Bellamy 1	*	....
Stafford, Scott & Co. Lewis 2	*	....
Star Oil Co. Richardson 1	*	....
Wood Oil Co. W. M. Church 63a, 5	12	515
W. M. Church 63a, 6	12	518
Pritchard, Gunn & Co. C. Bradford 1	3	175
Harrington & Norris Bros. Evans 3	16	....
Henderson Oil Co. Burris 6	3	546
Warren County—		
George McGinley Wilson 5	49	1153
Cunningham & Henry Bryant 8	15	1140
Amfot Oil Corp. Shanks 9	10	1118



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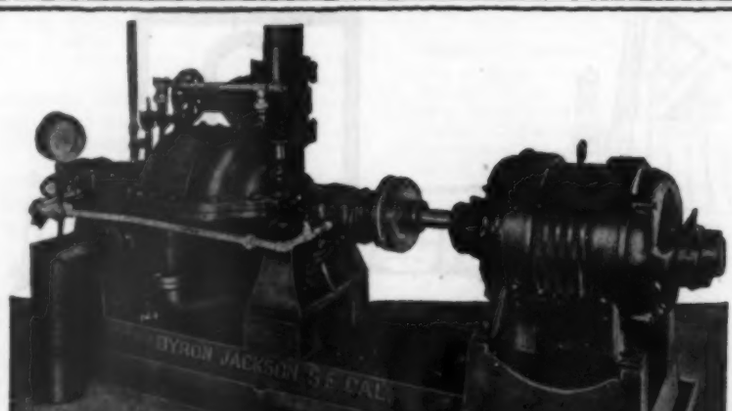
Company, Well and Location	Initial Production Bbls.	Depth
Westland Oil Corp. C. A. Keller 27	5	1050
Bolling & Loman Stanley 1	5	464
Lakay Oil Corp. Bronson 14	3	500
Evans & Co. Montague 1	*	....
Wayne County—		
Superior Oil Corp. Burnett 4	40	....
Wood Oil Co. B. S. Huffaker 25	*	450
Shearer, Marsh & Co. J. A. Brown 2	10	....
J. A. Brown 3	75	....
Bowden & Co. Morrow 4	6	....
Bell Bros. & Co. Coffey heirs 1	1	....
Allen County—		
White Plains Oil & Gas Co. J. R. Hornbuckle 9	7	400
Unknown Parties T. Hinton 2	6	341
Lee Moore Lee Moore 4	6	362
H. Grey R. R. Williams 1	2	245
Johnson-Magoffin Counties—		
Holbrook & Co. Allen 1	⅓	....
Midsouth Oil Co. S. Howard 5	4	....
Howard 6	7	....
Burning Fork Oil Co. H. Patrick 1	10	....

Company, Well and Location	Initial Production Bbls.	Depth
Owensboro District—		
Pennsylvania-Indiana Oil Co. J. H. Phillips 1	5	....
C. E. Daugherty Widow Crowe 3	2	....
C. A. Leeper & Co. Beauchamp 2	*	....
Lee-Owsley Counties—		
Petroleum Exploration Co.:		
Harve Marcum 1	¼	1320
Mart Abston 1	*	1240
C. Gourley 3	*	1175
Lawrence-Johnson Counties—		
Union Gas & Oil Co. W. D. Lester 7	80	814
P. P. Holbrook 31	50	827
Simpson County—		
Sally & Small Hogan 8	10	592
McCreary County—		
Brown & Co. Stearns & Co. 1	8	....
Estill County—		
Clark & Co. Smith 2	4	....



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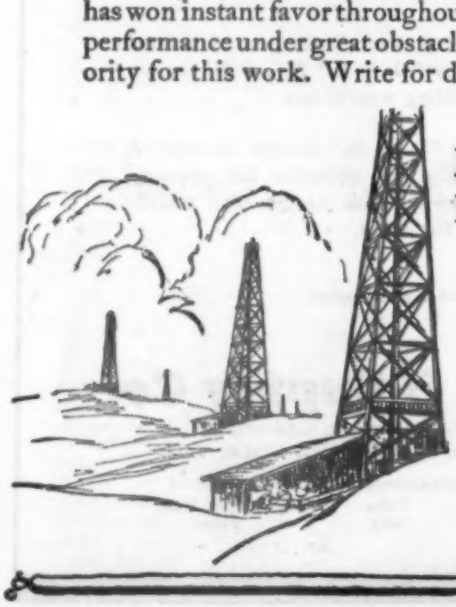

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BYRON JACKSON Service PUMP MFG. CO.

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Noble County—		
J. F. Haynes & Co. E. O. Davis 2	2	....
Albert P. Sheets & Co. Thomas Rupp 4	2	....
C. D. Harper & Co. Franci Hopp 1	*	400
Martha Murray 2	*	....
Wm. Patton & Co. William Davis 1	*	....
Morgan County—		
The Pure Oil Co. Wilbur Bush 2	25	....
Arkansas Fuel Oil Co. Roy Floyd 1	¼	....
Tuscarawas County—		
Stillwater Oil & Gas Co. F. A. Morrison 1	3	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Licking County—		
M. F. Whitehill & Co. Charles Derflinger 1	*	....
Jones & Reese James McKinney 13	½	....
Moore & Adams T. L. Stevens 10	2	....
Athens County—		
Biddle Oil & Gas Co. Frank Biddle 2	15	....
Slauter Oil & Gas Co. Slauter 1	35	....
Perry County		
O'Connor & Keller Sunday Creek Coal 19	2	....
Paxton Oil Co. Edgar Denman 1	*	3410
Holmes County—		
East Ohio Gas Co. F. C. Close 1	25	....
Empire Gas & Fuel Co. S. S. Troyer 2	½	....
Hocking County—		
Gordon Oil Co. W. L. Wagner 1	260	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Mercer County—		
Celina Pet. Co. M. Lynn 10	30	1289
E. G. Henderson & Co. Jacob Schmitz 4	5	1252
Central West Oil & Gas Co. P. J. Schmitz 1	4	1239
Wood County—		
Ohio Oil Co. S. B. Newcomer 36	30	1460
C. A. Browning C. A. Browning 20	*	1260
Chas. F. Zeising & Co. E. Brandt 7	3	1317
Shelby County—		
Johnson & Slagel Frank Dansig 1	20	1287
Ohio Oil Co. Ida M. Short 1	*	1300
Van Wert County—		
The Lima Trust Co. R. Hughes 7	20	1235
Lucas County—		
Ohio Oil Co. R. & A. Eck 12	18	1392
Auglaize County—		
W. B. Jack & Co. Mary Place 1	*	1300
Drake County—		
H. A. Marlin John Schoen 5	*	1341

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
Pike County—		
Miller & Davis Charles Rumble 1	15	1325
Knox County—		
Walter Sargent, geologist, W. M. Steckler 1	*	1585

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
Wabash County—		
Whiteside & Co. C. E. Courter 2	*	1520
Hughes & Peck R. Higgins 1	*	1530
Craigt, Weidmer & Smith Holson-Dorney 3	*	1575
Clark County—		
Lusk & Stratton G. L. Wiser 2	20	405
Lawrence County—		
Ohio Oil Co. W. C. Miller 39	10	1349
Coles County—		
H. McCurdy & Co. J. J. Courtney 1	*	580

PERMITS GRANTED FOR NEW WELLS

OKLAHOMA

Kay County—Vernon Oil and Gas Co., No. 1 Dieble, C N L SW NW SW 21-29-1e.

Garfield County—Magnolia Pet. Co. of Dallas Texas, No. 2 Mullens, C W L SE SE 11-22-4w (old well deepening); Cosden & Marland of Tulsa, Okla., No. 37 school land, C NE SE 13-22-4w; Cosden & Marland No. 41 school land, C SE SE SE 13-22-4w; Sinclair Oil & Gas Co. of Tulsa, No. 25 Denker, C SE SE SW 13-22-4w; Sinclair No. 2 N. Walker, C SW SE NE 13-22-4w (old well deepening); Healdton Oil and Gas Co. No. 30 Belveal, C NW NW NE 24-22-4w; Sinclair No. 26 Belveal, C NW NW NE 24-22-4w; Carter Oil Co. of Tulsa, No. 52 Dively C NE NE NW 24-22-4w; Roxana Pet. Co. of Tulsa, No. 1 Schroeder, C. SW SW SW 18-22-3w; Sinclair No 17 Hartley, C NW SE NW 18-22-3w. Crews Heirs of Tulsa, No. 18 Crews, NWc SE SW 19-22-3w; Crews Heirs No. 10 Crews, NEc SW 19-22-3w. Sinclair No. 20 Kisner, C NW NW NW 19-22-3w, Tidal Oil Co. of Tulsa, No. 1 Smith, SEc 12-21-5w.

Pawnee County—Adamson No. 4 Signon, SEc SW NW SW 32-21-8. The Texas Co. of Tulsa, No. 3 Ellis, SE NW NW 27-20-6e.

Creek County—Transcontinental Oil Co of Tulsa, No. 1 Bishop, SWc NW SW 13-17-8; Transcotinental No. 1 Morrison, SEc NE NW 25-17-8; Oklahoma Natural Gas Co. of Tulsa, No. 1-A Emarthla, NW NW SE 6-15-7; Demar Oil Co. No. 1 Ware, NWc NE 29-17-9; Transcontinental No. 16 Sharpe, C E L NE SW 27-16-9. Billingsley of Tulsa, No. 4 Jones, NEc NE NE 28-14-9.

Lincoln County—The Texas Co. of Tulsa, No. 2 Oleson, NEc SW SW 2-4-5. Magnolia Pet. Co. of Dallas, No. 2 A. Sukovaty, SWc NW SW 2-14-6. Selby Oil & Southwestern Pet. Co. of Tulsa, No. 2 Bagwell, NEc SE SE 3-14-5.

Tulsa County—Baker & Lynch No. 1 Franklin, SWc 26-19-11. Riverland Oil Co. of Tulsa, No. 1-A Inchoe, NWc 35-19-11. Echo Oil Co. of Tulsa, No. 4 Grayson, SWc SE NE SW 5-19-12. Sand Springs Home of Sand Springs, Okla., No. 9 Berryhill, C E L W½ SE NW 5-19-12. Thornton et al, No. 1-A Douglas, NEc NW SE 21-19-12. Brooks Drilling Co., No. 1 Unallotted, NWc 29-19-12, Red Bank Oil Co of Tulsa, No. 1 Chisholm, C W L NE SW 12-18-13. W. B. Pine of Okmulgee, No. 1 Cooper, SEc SW 35-16-13.

Grady County—Oklahoma Natural Gas Co. of Tulsa, No. 2 Sanford, NEc NW NE SW 23-5n-8w. Magnolia Pet. Co. of Dallas, No. 1 Rockhold, SEc SE NW 11-4n-8w.

Okmulgee County—Independent O. & G. Co. of Okmulgee, No. 10 Haskins, NWc SE NW 27-16-12. Sheldon Oil Co., No. 4 McGee, C NE NW 34-16-12. Shelden Oil & Superior of Tulsa, No. 5 Vore, SWc SE SE NW 34-16-12. Webster et al, No. 8 Grayson, SWc NW NE SW 3-15-11. Eastern Oil Co., No. 11 Berry, C SE NW NE 32-15-11. King et al, No. 3 Budleman, SWc NE SW 11-13-12. Simms Oil Co. of Dallas, No. 3-A K. Rentie, NWc SW NW 31-12-12. Simms Oil Co., No. 5-B Rentie, NWc SE NW 31-12-12. Aztec Oil Co. of Tulsa, No. 1 L. Rentie, NWc SW SW 31-12-12. Aztec Oil Co., No. 4 L. Rentie, NWc NE NW 31-12-12. Oklahoma Eastern Oil Co. of Tulsa No. 4, B. Wisener, C W½ SE 7-15-13. T. D. Misener of Tulsa, No. 9, P. Adams, C S L NE SE 28-15-14.

Okfuskee County—Kirkpatrick et al, No. 1 Jones, SWc NE 1-12-9. G. & M. Oil Co., No. 1 Deer, C S L SE SE 34-12-11. Deaner et al, No. 2 Jacobs, SWc SE 15-11-11 (old well deepened). Barbara Oil Co., No. 2 Fields, C W L SE NE 3-11-11. Vincent et al, No. 1 Unallotted, NEc SE 28-11-11. Roxana Pet. Co. of Tulsa, No. 4 Haner, C NE NW SW SE 16-10-9. Carter Oil Co. of Tulsa, No. 1 Polly Johnson, NWc SW SE 33-10-9 (old well deepening).

Seminole County—Carter-Gardner Pet. Co. of Tulsa, No. 1-A Sands, C SW SW SE 27-11-8. Cosden & Waite Phillips Co. of Tulsa, No. 7 H. Williams, C NE SW NW 33-11-8; No. 8 H. Williams, C SW NE SW 33-11-8. Sinclair & Houston Oil Co. of Tulsa and Houston, No. 1 M. Hill, C SW NW NE 33-11-8; No. 2 M. Hill, C SE NW NE 33-11-8. Carter Oil Co. and Pulaski Oil Co. of Tulsa, No. 4 Baker, C SE NW SW NW 34-11-8. Sinclair Oil Co. of Tulsa, No. 2 S. Jackson, C NW SW NW 34-11-8. Southwestern Pet. Co. of Tulsa, No. 3 S. Little, C NW SE 3-10-8. Carter Oil Co. of Tulsa, No. 16 N. Dunn, C NE NE NW 3-10-8.

Hughes County—I. T. I. O. Co. of Bartlesville, No. 1 M. Anderson, C NW SW SW 1-9-9; No. 2 Anderson, C SW NW SW SW 1-9-9. T. B. Slick of Tulsa, No. 1 M. Carolina, C NE SE SE 2-9-9. Independent O. & G. Co. of Okmulgee, No. 2 M. Carolina, C SE NE SE 2-9-9.

Garvin County—Harkreader No. 9 Concord C NE SW SE 11-1n-3w. Carter Oil Co. of Tulsa, No. 2 Derdeys, NWc SW NW 17-1n-3w. Rope & Wilson, No. 1 Derdyn, C NE NE SW 17-1n-3w. Texas Pacific Coal & Oil Co. of Fort Worth, Texas, No. 4 Derdeyn, SWc SE NW NW 17-1n-3w.

Stephens County—Ka Wye Pet. Co. and Roxana of Tulsa, No. 1 Hines, C NW SW SW 25-1n-9w. Crump & Beard, No. 1-B Kukuk, C SW SW NW 14-1s-8w. Walker Valley Oil Co., No. 1-A Anderson, C SE SE NW 27-1s-8w. Empire Gas & Fuel Co. of Bartlesville, No. 2 Story, NE SE SE NW 32-1s-8w. Clark & Cowden No. 3, Bristowe, C SW NW NW 18-2s-7w.

Pottawatomie County—Darby Pet. Co. of Tulsa, No. 1 Srandridge, C SE SE NE 15-17-4e.

Carter County—Magnolia Pet. Co. of Dallas, No. 4 Johnson, C NW SW NE 32-1s-3w. C. R. Smith No. 3 Smith-Davis, C SE SE SW 23-2s-3w. Morrick-Kirk No. 2 Williams, C SE SE SW 5-3s-2w. Amerada Pet. Corp. of Tulsa, No. 6 Fish, C SE NW SE 28-5s-1w.

Wagoner County—Martin No. 6 Luckey, C E L SW SE SE 9-17-16. Carmacker No. 1 W. Sarty, NWc SE NW 21-17-16 (completed. Lorraine Oil Co. of Tulsa, No. 8 M. Taylor, SEc NE NE SW 1-17-17.

Osage County—Skelly Oil Co. of Tulsa No. 2, SEc NE NE 2-21-8; Skelly No. 9, SE NE SW 16-21-12. Beacon Oil Co. of Tulsa, No. 1 SEc SW NE NW 21-23-8. Gilliland Oil Co. of Tulsa, No. 7, NE SE SE 24-25-8. Phillips Pet. Co. of Bartlesville, No. 1, NEc NW NW 10-25-10. The Texas Co. of Tulsa and Houston, No. 1, NE SW 34-26-4. Skelly Oil Co. of Tulsa, No. 3, SE SW 2-27-5. Tidal Oil Co. of Tulsa, NEc SE 2-27-7. A. M. Landon of Tulsa, No. 1 SEc SW NW 15-28-9. Wiser Oil Co. of Bartlesville, NWc SE NW 27-29-11. Wah-Sha-She Oil Co., No. 6. SEc SW SE 27-29-11.

CALIFORNIA

Coalinga Field—Zier Oil Co.'s No. 26, 1-20-14

Huntington Beach Field—Standard Oil Co.'s Thomson 6, 12-6-11. Shell Co.'s Davenport 7, 2-6-11.

Inglewood Field—Associated Oil Co.'s Vickers 5, 7-2-14; Vickers 8, 7-2-14; Vickers 9, 7-2-14. Standard Oil Co.'s Vickers 1-4, 7-2-14.

Kern River Field—Wilmar Oil Co.'s No. 7, 20-28-28.

Long Beach Field—Drilling Co.'s Hunt 1, 24-4-13; Wellman 1, 24-4-13. Richmond Oil Co.'s No. 1, 19-4-12.

Los Angeles County Field — Midway Gas Co.'s Leuzinger 1, 8-3-14.

McKittrick Field — Washington Petroleum Corp.'s No. 4, 8-20-22.

Midway Field — Standard Oil Co.'s Eagle Creek 31, 31-31-23. North American Oil Co.'s No. 19, 30-31-24; No. 20, 30-31-24. Honolulu Cons. Oil Co.'s No. 12, 4-32-24.

Orange County Field—Associated Oil Co's Hellman 1, 12-5-12.

Richfield Field—Craig Burns & Co.'s No. 1, 36-3-9.

Rosecrans Field—Dominion Oil Co.'s Athens 3, 7-3-13. Marine Corp.'s No. 42, 7-3-13. Bud Gerner's Bob Gerner 1, 7-3-13. Hercules Gasoline Co.'s No. 2, 7-3-13.

South Mountain Field—Union Oil Co.'s Caldwell & Snyder 1, 13-3-21.

Sunset Field—Midway Oil Co.'s No. 375, 35-12-24. Standard Oil Co.'s M. J. M. & M. 58, 36-12-24; M. J. M. & M. 59, 36-12-24.

Wheeler Ridge Field — General Petroleum Corp.'s No. 4, 28-11-20.

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

	Number of Wells for Week Ending															
	Jan. 3	Jan. 9	Jan. 16	Jan. 23	Jan. 30	Feb. 6	Feb. 13	Feb. 20	Feb. 27	Mar. 6	Mar. 13	Mar. 20	Mar. 27	April 3	April 10	April 17
Kansas	..	4	28	20	9	19	22	29	24	82	24	36	55	34	23	37
Oklahoma	32	28	48	56	56	80	115	96	108	100	94	94	73	115	107	96
Arkansas	12	11	21	20	19	13	29	21	31	30	67	55	80	54	55	34
Louisiana	8	13	19	4	9	25	16	20	14	9	14	14	14	4	9	14
Texas	...	64	166	117	158	137	177	207	133	189	210	218	198	187	214	213
California	13	19	19	18	10	19	19	18	27	12	40	24	36	42	26	28
Total	134	184	296	235	261	298	378	391	337	422	449	441	456	436	434	422

KANSAS

Barber County—R. B. Brown et al's No. 1 Martin, NWc 14-34-11w.

Butler County—Burford & Brim's No. 1 Templeton, NEc NW 34-23-6. Victor Martin et al's No. 1 Sweitzer, NEc NW 20-24-5. Miller Bros. et al's No. 1 Bump, SEc SW 6-27-4.

Cowley County—Lewis Oil Co.'s No. 4 Robbins, SEc SW NW 31-30-6. Trees Bros.' No. 2 Smith, NWc NE SE 10-31-3; No. 3 Shaffer, NW SE NE 10-31-3. H. W. Hammill's No. 1 Branson, NEc SE NE 29-32-7. Marland Oil Co. of Ponca City, Okla. No. 1 Wright, SEc NW NE 10-33-3; No. 2 Wright, NEc SW NE 10-33-3; No. 3 "A" Bower, SEc SW NW 10-33-3. Joe Nathan et al's No. 1 "A" Jarvis, NWc NE 20-34-4.

Greenwood County—Davis, Hazlett et al's No. 4 De Malorie, SWc SE 12-22-10. Phillips Petroleum Co. of Bartlesville, Okla., No. 1 Warrensburg, SEc SW 12-22-10. Skelly Oil Co., of Tulsa, Okla., No. 2 Warrensburg, NWc NE NW 13-22-10. Allen et al's No. 3 Kipfer, SEc NW NE 13-22-10. Sinclair Oil & Gas Co., of Tulsa, No. 15 Browning, NEc NW SE 19-22-10. Empire Gas & Fuel Co., of Bartlesville, Okla., No. 4 Hind, NWc SW 11-22-11; No. 1 Bush, NEc NW SW 12-22-11; No. 4 Freeman, NEc NW NE 14-22-11; No. 2 Bartlett, SEc NE SE 15-22-11; No. 4 Pees NEc 15-22-11. Fisher, Lauck et al's No. 2 Richards, SWc NE SE 22-22-11. York State Oil Co.'s No. 2 "C" De Malorie, NEc SE NW 32-22-11. Murphy et al's No. 2 Green, SWc 2-23-9. Mississipi Valley & Emerald's No. 1 Teeter, SWc SE NW 24-23-9. Joe Nathan's No. 1 Lampe, SWc SE NE 35-24-8. Phillips Petroleum Co.'s No. 6 Hover, SEc NW SW 3-25-9. Mid-Kansas O. & G. Co.'s No. 11 Ladd, NWc NE SE 19-25-9 Mid-Kansas Oil & Gas Co.'s No. 12 Ladd, NWc SE NE SE 19-25-9.

Lyon County—Loy & Chaney's No. 1 Jones, SWc SE SW 6-21-10.

Russell County—Derby Oil Co.'s No. 2 Sutton, SEc NW NW SW 5-12-15w; No. 3 Sutton, SEc NE SW 5-12-15w. Streeter & Stearns' No. 1 Kellerman, SEc SW NW 5-12-15. Valerius Oil & Gas Co.'s No. 3 Sutton, NEc SE SW 5-12-15w. Midwest Refining Co.'s No. 1 Oswald, SEc SW NW 8-12-15w; No. 2 Oswald, SWc SE NW 8-12-15.

ARKANSAS

Ouachita County—Gulf Ref. Co.'s Goodwin A-6, 5-16-15, 200 ft S and 1120 ft E of NWc of Section; Reynolds 6, 23-15-17, 1520 ft S and 200 ft E of NWc of Section. Humble O. & R. Co.'s Berg B-3, 30-15-15, NEc NW¼ SW¼. D. N. Johnson's Farris 4, 34-15-15, NWc SW¼ SE¼. Lion Oil & Ref. Co.'s Hayes 4, 4-16-15, SWc Lot 5, NE¼. Magnolia Pet. Co.'s Clawson 3, 35-15-17, SEc NW¼ SE¼. Roxana Pet. Co.'s Umstead 4, 4-16-15, 240 ft N and 250 ft E of SWc Lot 2 in NW¼. Standard Oil Co.'s H. Murphy 11, 5-16-15, SWc SE¼ NE¼. Unity Pet. Co.'s Umstead 4, 33-15-16, SWc NW¼ SW¼. Wingfield et al's Umstead 3, 4-16-15, center of south line of Lot 1 in NW¼.

Union County—Arkansas Fuel Oil Co.'s Alphin 5, 11-16-15, 200 ft S and E of NWc NE¼ SW¼; Ferguson 5, 6-16-15, 200 ft N and 330 ft W of SEc SW¼ SW¼. J. W. Clark's Cook 6, 17-16-15, 150 ft S and 330 ft E of NWc SE¼ NE¼. Gulf Ref. Co.'s Berry 8, 8-16-15, 1026 ft S and 2223 ft E of NWc of Section; H. Murphy 17, 3-16-15, 2310 ft N and 330 ft E of SWc of Section. Lion Oil & Ref. Co.'s Bilyieu A-1, 8-16-15, SEc SE¼ NE¼; Hayes 3, 4-16-15, NEc Lot 5 NE¼; Murphy A-6, 7-16-15, SEc NE¼ SE¼; Murphy G-2, 8-16-15, NEc NE¼ SE¼; Murphy H-2, 9-16-15, center of north line W½ SE¼ NW¼. Magnolia Pet. Co.'s Campete-Campbell 5, 13-16-17, NEc of NW¼; M. J. Scott 2, 12-16-17, NWc NE¼ NW¼. Maydo Oil Co.'s Lawton B-2, 10-16-15, NWc NE¼ SW¼. Page Oil Corp.'s Murphy 6, 7-16-15, NWc SE¼ SW¼. Parish et al's Ferguson 3, 6-16-15, 200 ft N and 330 ft E of SWc of Section. Penguin Oil Co.'s Sanford 3, 17-16-15, NEc NE¼ NW¼. Pure Oil Co.'s Bilyieu 3, 8-16-15, SWc NE¼ NE¼; Bilyieu 4, 8-16-15, SEc NE¼ NE¼. Roxana Pet. Co.'s Flenniken B-3, 5-16-15, SWc SW¼ SE¼; Umstead 4, 4-16-15, SWc N½ Lot 2 in NW¼. Shreveport Oil Corp.'s Murphy B-2, 9-16-15, SWc NW¼ SE¼. Simms Oil Co.'s Cook 6, 16-16-15, 330 ft S and W of NEc NW¼ NE¼. Unity Pet. Co.'s Roper 10, 3-16-15, NWc NE¼ SW¼. Wetherbee et al's McGraw 1, 7-16-16, NEc of Section.

LOUISIANA

Bossier Parish—W. E. Olmstead et al's Smith 2, 22-19n-11w, 670 ft W and 150 ft N of SE Cor. of NE¼ of SE¼.

Caddo Parish—Dixie Oil Co.'s La. State 5, 24-21n-15w, 1145 ft E and 1100 ft S of NW Cor of Sec. Standard Oil Co. of La.'s Stiles 171, 27-21n-16w, 165 ft S and 1125 ft E of NW Cor. of SW¼.

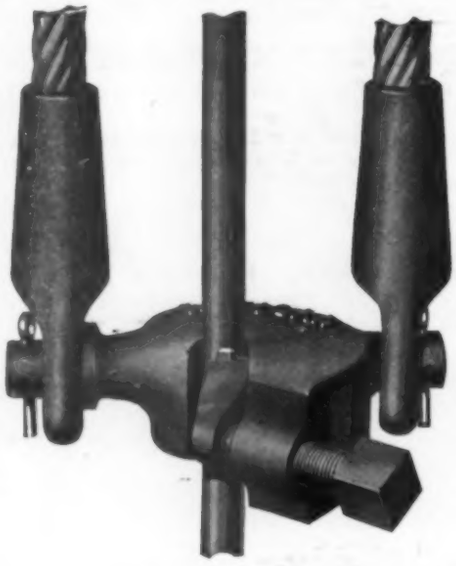
Calcasieu Parish—The Union Sulphur Co.'s Union Sulphur 714, 29-9s-10w, 907 ft W and 285 ft N of SE Cor. of NW¼.

La Salle Parish—Helm & Burch's Urania 1, 28-11n-2e, 660 ft W and 660 ft S of NW Cor. of Sec. Bill Rowe et al's Urania 1, 7-10n-2e, 200 ft E and 200 ft N of Sw Cor. NW¼ of SW¼. Geo. W. Zeigin's Urania 1, 19-10n-2e, 200 ft S and 200 ft W of NE Cor. of Sec., (Changed location).

St. Martin Parish—The Ohio Oil Co.'s Champagne 1, 94-10s-6e, 1650 ft S and 5528 ft E of NW Cor. of Sec.

Webster Parish—Gulf Ref. Co. of La.'s Hodges A-1, 25-21n-10w, 330 ft S and 330 ft E of NW Cor. of SW¼. The Ohio Oil Co.'s Gray 10, 26-21n-10w, 330 ft S and 330 ft E of NW Cor. NW¼ of SW¼; Gray 11, 27-21n-10w, 330 ft N and 330 ft W of SE Cor. NE¼ of SE¼; Gray 12, 27-21n-10w, 330 ft N and 330 ft E of SW Cor. NE¼ of SE¼; Bodcaw Lbr. Co. 31, 28-21n-10w, 330 ft S and 330 ft W of NE Cor. NW¼ of NW¼.

Winn Parish — Gould-Monroe Drlg. Co.'s Harper 1, 23-10n-1e, 2840 ft S and 1430 ft E of NW Cor. of Sec.



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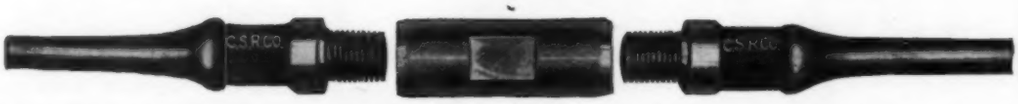

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TEXAS

Archer County—White Eagle Oil & Ref. Co.'s, Wichita Falls, Texas, W. S. Scruggs 4, B 3, J. L. Anderson sur, 300 ft S No. 1. Shaw & Rathke's, Wichita Falls, Texas, E. A. Hausler 9, Hardaway & McCoy sur; M. E. Rogers 2, 1596 TE&L sur, 150 ft to N and W lines Dale Oil Corp.'s, Wichita Falls, Texas, Wilmot 11, S 4, S. P. Ry sur, south of No. 8. Navarro Oil Co.'s, 910 Eighth St., Wichita Falls, Texas, L. Wilson 1, B 112, J. M. Taylor No. 2 sur, 1320 ft to E and 150 ft to S line. Davis Hart Co.'s, Staley Bldg., Wichita Falls, Texas, Roach & Junker 7, 1594 TE&L sur, 300 ft W No. 6. Jeffers & Jeffers', Chenault Bldg., Wichita Falls, Texas, W. L. Andrews 1, B 2, J. A. Tarley sur, 150 ft to E and 466 ft to S line. D. L. Wolf's, Box 186, Olney, Texas, B. B. Teague 1, S. G Hardaway sur, 150 ft to W and 2225 ft to S line. Riner & Bailey's, Wichita Falls, Texas, L. F. Wilson 18, B 29, Amer Trib sur, 450 ft SE No. 7; 25, B 29, Amer Trib sur, 810 ft to E and 150 ft to S line. Wirt Franklin's, Ardmore, Okla., W. F. Parrish 8-B, S 26, H&TC Ry sur, 362 ft N No. 6. Roy I. Carter's, City Nat. Bank Bldg., Wichita Falls, Texas, L. W. McCrory 1, No. 2 Day Land & Cattle sur, 150 ft to S and E lines. Shappell Oil Co.'s, Wichita Falls, Texas, J. L. Jackson 19, B 23, D. C. S. L. sur No. 4, 300 ft W No. 10. Arco Oil Co.'s Care of L. H. Cullum, Wichita Falls, Texas, J. Stehlik 1, B 6, D. C. S. L. sur No. 3, 150 ft to S and W lines. Waite Phillips Co.'s, Tulsa, Okla., W. A. Keys 1, S 17, J. Swisher sur, 150 ft to S and 1470 ft to W line. Atlantic Oil Prod. Co.'s, Dallas, Texas, W. F. Parrish 7, S 26, H&TC Ry sur, 340 ft N No. 6. O'Donohoe Gates Drilling Co.'s, City Nat. Bank Bldg., Wichita Falls, Texas, J. J. Perkins 1, B 15, D. C. S. L. sur No. 3, 150 ft to N and E lines. Oil Investment Co.'s Staley Bldg., Wichita Falls, Texas, Fee 8, J. Richards sur, 300 ft SW No. 7. Kellogg & Dolman's Staley Bldg., Wichita Falls, Texas, R. O. Prideaux 1, J. Dorsey sur, 150 ft to S and E lines. Continental Oil Co.'s. Fort Worth, Texas, J. F. Rogers 4, 2407 TE&L sur, 350 ft W No. 3. Simms Oil Co.'s, Dallas, Texas, W. F. Parrish 8, S 26, H&TC Ry sur, 300 ft S No. 7. Woodburn Oil Corp.'s, Dallas, Texas, L. F. Wilson 17, S 26, Amer Trib sur, 340 ft W No. 2. Sun Oil Co.'s, Dallas, Texas, W. R. Farmer 10, D. C. S. L. sur, 600 ft NW No. 1. Shamrock Oil Co.'s, Wichita Falls, Texas, J. T. Richardson 19, S. Anderson sur, 366 ft E No. 9. Gulf Production Co.'s, Fort Worth, Texas, J. F. Rogers 7, 2406 TE&L sur, 300 ft E No. 4. Shamrock, Bridwell & Mayfield's, Wichita Falls, Texas, J. T. Richardson 18, BBB&C Ry sur, 366 ft E No. 16. Texhoma Oil & Ref. Co.'s, Wichita Falls, Texas, L. F. Wilson E-4, S 27, Amer Trib sur, 150 ft to S and E lines. Texas Co.'s, Wichita Falls, Texas, M. Phillips 1, G. W. Steele sur, 3108 ft to W and 150 ft to S line.

Brown County—C. O. Moore et al's, Cross Plains, Texas, W. H. Chambers 1, SA&MG Ry sur, 800 ft to S and 200 ft to E line. Rhodes & Highers', Breckenridge, Texas, W. A. Prater 3, W. B. Travis sur, 150 ft to N in center of line. Mahlstedt Mook Oil Co.'s, Ft. Worth, Texas, G. B. Gaines 4, Wm. Miller sur, 150 ft to N in center of line; J. W. Newton 9, Wm. Miller sur, 350 ft S No. 5. A. J. Bruce's, Brownwood, Texas, H. L. Leach 1, No. 609 sur, 150 ft to N and 775 ft to W line.

Brazoria County—Hyde Production Co.'s, Houston, Texas, Humble 1, Geo. Tennille sur, 50 ft to N and 40 ft to W line. Humble Oil & Ref. Co.'s, Houston, Texas, Tyndall-Wyoming 12, M. Varner sur, 250 ft to S and 50 ft to W line.

Bexar County—Ballard & Underwood's, Travis Bldg., San Antonio, Texas, E. Eastward 1, J. T. White sur, 167 ft to E and 1330 ft to S line. Hitchman & Howard's, Travis Bldg., San Antonio, Texas, W. H. Brown Est. 12, 294½ sur, 312 ft NE No. 3.

Baylor County—E. M. Jones', Waggoner Bldg., Wichita Falls, Texas, M. K. Bassett 1, Jas. Smith sur, 150 ft to S and E lines. D. H. Moore's, Box 569, Seymour, Texas, H. H. Fancher 3, S 4, H&TC Ry sur, 605 ft to W and 200 ft to S line.

Callahan County — Homer N. Chapman's,

Dallas, Texas, Z. C. Wagley 3, S 2, D&D Asy sur, 150 ft to S and W lines. Parkersburg Drilling Co.'s, Box 19, Cisco, Texas, L. H. Qualls 22, 2279 TE&L sur, 400 ft W No. 21. W. S. Hinds, Baird, Texas, J. E. Dunaway 1, S 3, GC&SF Ry sur, 846 ft to W and 1146 ft to S line. Godley Oil & Gas Co.'s, Henrietta, Texas, R. L. Buchanan 16, S 8, Bayland Asy sur, 300 ft S No. 8. Dave Duncan et al's, Gude Hotel, Eastland, Texas, J. P. Mann 1, (Coleman County). Geo. Christie's, Cisco, Texas, M. Kennedy 2, S 11, Bayland Asy sur, 150 ft to N and 450 ft to W line. Frank Nickel's, Cisco, Texas, Mrs. J. T. Davis 1, S 1, Bayland Asy sur. Wittmer Property Trustee's, Putnam, Texas, Fee 1, S 5, Bayland Asy sur. L. A. White's, Cisco, Texas, Wagley 5, 2270 TE&L sur, 150 ft to W and 750 ft to N line. D. R. Shupe's, Rte. 2, Moran, Texas, H. Wagley 8, 2996 TE&L sur, 600 ft to S and E lines. Fred Pool et al's, Moran, Texas, E. T. Terry 2, S 47, Insane Asy sur, 1200 ft to W and 900 ft to S line. J. H. Holdeman's, Cisco, Texas, Mrs. R. D. Williams 3, 2269 TE&L sur, 150 ft to N and E lines; 4, 2269 TE&L sur, 300 ft W No. 3; 9, same sur, 750 ft to E and 150 ft to N line; 10, same sur, 750 ft to W and 150 ft to N line; 15, same sur, 300 ft W No. 10; 16, same sur, 150 ft to N and W lines.

Caldwell County—Sun Oil Co.'s, Dallas, Texas, A. H. Gomillion 3, P. Martinez sur, 300 ft NE No 2; 4, same sur, 150 ft to N and E lines; 5, same sur, 300 ft SW No. 2; 6, same sur, 150 ft to S and E lines; 7, same sur, 1205 ft NE No. 1; 8, offset of Humble-Brewer No. 1. Lucey Petroleum Co.'s, Magnolia Bldg., Dallas, Texas, Mrs. H. E. Palmer 1, F. Castillo sur, 150 ft to N and W lines. Gulf Production Co.'s, Houston, Texas, C. H. Beatty 3, J. Burleson sur, 300 ft SE No. 2; 4, same sur, 300 ft SW No. 1; M. L. Brewer 1, J. Burleson sur, 650 Vs to W and 54 Vs to N line; 2, same sur, 150 ft to N and W lines.

Coke County—H. C. Dickey & Co.'s, Fort Worth, Texas, W. J. H. Rogers 1, No. 431 H&TC Ry sur.

Coleman County—Crabb, Lutkens & Kellar's, Box 369, Cross Plains, Texas, G. Koenig 1, No. 163 Wm Mason sur, 150 ft to S and W lines. M. E. Wakefield's, Cross Plains, Texas, Mrs. M. O. Henderson 1, A. White sur, 155 ft to W and 310 ft to S line. Thos. Weatherred Jr.'s, Cisco, Texas, W. L. Edmondson 1, D. J. Holt No. 166 sur, SE cor. Dave Duncan et al's, Gude Hotel, Eastland, Texas, J. P. Mann 1, Alexander No. 190 sur, 500 ft to E and 300 ft to S line. Canyon Oil and Gas Co. Inc.'s, Cross Plains, Texas, W. T. Burns 1, Wm. Mason sur, 50 ft to S and 520 ft to E line; 3, same sur, 150 ft to S and W lines. Shaw, Fox & Adams, Burkett, Texas, J. C. Watson 1, Mason sur, 450 ft to E and 150 ft to S line.

Chambers County—Humble Oil & Ref. Co.'s, Houston, Texas, Jackson 3-A, J. A. Jackson No. 124 sur, 650 ft to N and 100 ft to E line.

Eastland County—Sirmans Oil Co.'s, Cisco, Texas, T. H. Weddington 7, S 4, Bayland Asy sur, 350 ft to N in center of line; 8, same sur, 300 ft S No. 7. Chas. Welch's, Cisco, Texas, J. F. Penn 1, S 11, BBB&C Ry sur, 450 ft to S and W lines. Ratblatt & Nedler, Cisco, Texas, K. M. Jeffreys 1, S 3, 200 ft to N and 500 ft to E line.

Fort Bend County—Union Sulphur Co.'s, Humble Bldg., Houston, Texas, T. W. Davis 19, M. Young. Gulf Production Co.'s, Houston, Texas, J. M. Moore 4, L. Burknap sur, 3194 ft to W and 1441 ft to S line. Marland Oil Co. of Texas', Cotton Exchange Bldg., Houston, Texas, Meier 1, H. I. Bolton sur, 462 ft to N and 2313 ft to W line. Humble Oil & Ref. Co.'s, Houston, Texas, Waytek 1-A, Wm. Garrett sur, 270 ft to W and 210 ft to N line.

Galveston County—Texas Co.'s, Houston, Texas. R. S. Coon 2, W. B. M. Baker sur, 870 Vs to E and 370 Vs to N line; 1, same sur, 2470 Vs to E and 550 Vs to S line.

Goliad County—Houston Oil Co. of Texas', Houston, Texas, C. G. Wood 1, M. J. Rios sur, 2000 ft to E and 3650 ft to S line.

Harris County—Cezeaux & Martin, Humble, Texas, Burt & Griffith 3, Burt sur, 1800 ft to W and 250 ft to S line. Southern Petroleum Co.'s, Box 1788, Houston, Texas, Landslide 43, B 6, R. Dunman sur, 400 ft to E and 225

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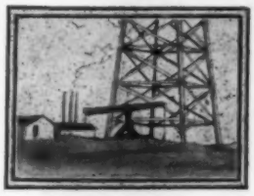
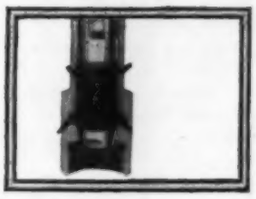
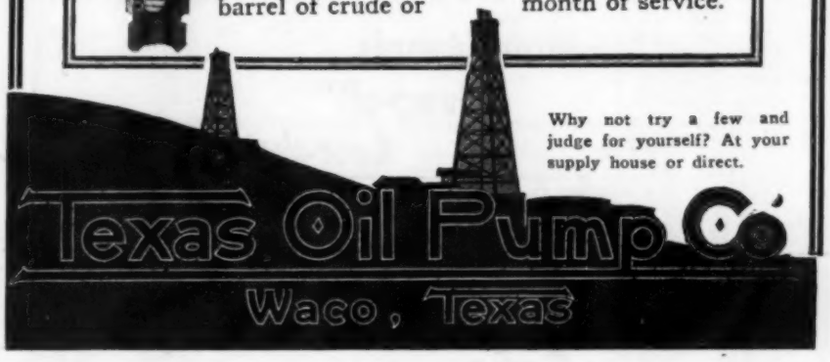


2. It makes possible a bigger pump stroke—greater capacity.



3. It does away entirely with loose, leaky cups and leather rings.

4. It has longer life, gives greater service and is more economical whether figured per barrel of crude or month of service.



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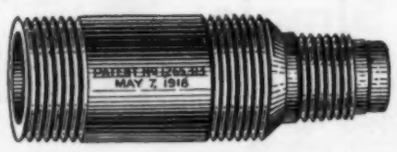

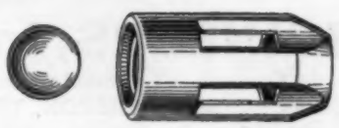

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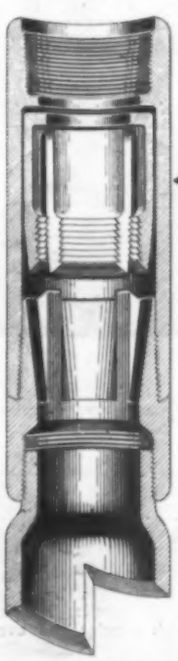

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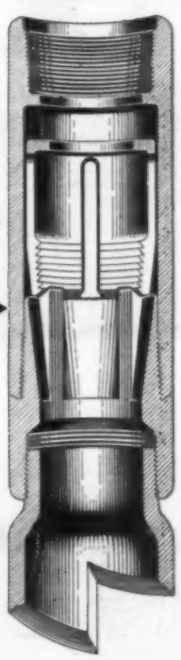
Position of slip when in contact with pipe collar; slots in line with keys.

Slips held up by keys in released position.



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ft to S line. Humble Oil & Ref. Co.'s, Houston, Texas, East Texas Oil Co. 1-A, V. Blanco sur, 3000 ft to N and 4000 ft to W line. Gulf Production Co.'s, Houston, Texas, Beaumont Pet. 24, Tabb A sur, SE cor; Paddock-Smith 5, Wm. Scott sur, NW cor.

Haskell County—H. H. Adam's, W. T. Waggoner Bldg., Ft. Worth, Texas, Proctor Est. 1, A. Rodriguez, center.

Harrison County—Waterman Lumber Co.'s, Waskom, Texas, Fee 3, R. W. Bedford sur, 150 ft to S and E lines. Braswell & Houston's, 835 Kirby Place, Shreveport, La., C. A. Gordon 1, W. H. Adams sur, center.

Hardin County — East Batson Oil Co.'s, Batson, Texas, Stateland 13, 215 ft to N and 56 ft to E line.

Hutchinson County—Coble-Davidson Petroleum Co.'s, Box 398, Amarillo, Texas, Whittenburg 1, No. 12 I&GN Ry sur, 330 ft to S and W line.

Jim Hogg County—Humble Oil & Ref. Co.'s, Houston, Texas, East 6, S. A. Virgo sur, 8154 Vs to W and 404 Vs to N line.

Jasper County—Humble Oil & Ref. Co.'s, Houston, Texas, Bond 1-A, S 12, T&NO Ry sur, 500 ft to N and 1000 ft to W line.

Jefferson County—Eddy Oil Co.'s, Guffey, Texas, Lone Acre Oil Co. 7, J. A. Veatch sur, B. 33, 40 ft to N and 25 ft to E line.

Liberty County—J. S. Abercrombie Inc., West Bldg., Houston, Texas, D. J. Harrison 4, D. Minchey sur, west of No. 3; 1, same sur, center; 2, same sur, 250 ft W No. 1; 3, same sur, SW No. 2. Sun Oil Co.'s, Beaumont, Texas, Schade 10, D. Minchey sur, 250 ft W No. 9; 9, same sur, 245 ft W No. 5. Vacuum Oil Co.'s, Gulf Bldg., Houston, Texas, Barrett 9, M. G. White sur, 150 ft to E and 50 ft to S line. Humble Oil & Ref. Co.'s, Houston, Texas, Pickett 4, M. G. White sur, 50 ft to S and 275 ft to W line; 5, same sur, 50 ft to S and 275 ft to E line; S. C. Chambers 3, M. G. White sur, 403 ft to N and 38 ft to E line; 4, same sur, 313 ft to N and 42 ft to E line; Schade 1-A, D. Minchey sur, 75 ft to N and E lines. Republic Production Co.'s, Houston, Texas, Dolbear 116, J. Devore sur, 2256 ft to N and 2037 ft to E line; 117, same sur, 1935 ft to E and 1000 ft to S line. Gulf Production Co.'s, Houston, Texas, O. A. Schade 7, D. Minchey sur, 250 ft W No. 4; A. Deussen 2, D. Minchey sur, 100 ft S of Sinclair-Deussen No. 1; J. F. Richardson 1, M. G. White sur, 2268 ft to E and 29 ft to N line; 2, same sur, 2018 ft to E and 32 ft to N line; 3, same sur, 1768 ft to E and 35 ft to N line; 4, same sur, 1618 ft to E and 35 ft to N line; F. Antoine 1, D. Minchey sur, 50 ft to N and E lines; O. A. Schade 5, D. Minchey sur, 186 ft E No. 3; 6, same sur, 195 ft W No. 3; A. Deussen 1, D. Minchey sur, 4461 ft to E and 357 ft to N line. Mills Bennett's, Second Natl. Bank Bldg., Houston, Texas, E. W. Pickett 9, B 3, M. G. White sur, east of No. 8; 10, same sur, SE cor.

Limestone County—Pure Oil Co.'s, Mexia, Texas, N. B. Boyd 18, S. McAnulty sur, 500 ft N of J. P. Lindley No. 2; 22, same sur, 500 ft W of J. P. Lindley No. 2. A. J. Aisemayer's, Springfield, Mo., W. S. Baker 1, Chas. Moore sur, 150 ft to E and 750 ft to S line. Guffey & De Ariman's, Groesbeck, Texas, S. Welch 1, Varela sur, 1000 ft to S and 450 ft to E line.

Montague County — Texas Co.'s, Wichita Falls, Texas, N. J. Howard 1, J. Chambliss sur, 200 ft to S and W lines. Petroleum Prod. Co.'s, City Nat. Bank Bldg., Wichita Falls, Texas, C. H. Howard 1, F. Robertson sur, SW cor. Texhoma Oil & Ref. Co.'s, Wichita Falls, Texas, N. J. Howard 4, J. Chambliss sur. P. F. Lesh's, Box 1043, Wichita Falls, Texas, R. Hynds 2, J. L. McFarlan sur, 150 ft to S and E lines.

McLennan County—H. R. Crain et al's, Waco, Texas, J. Hooper 1, Mitchell sur, 150 ft to W and 450 ft to S line.

Milam County—A. F. Brady's, Ardmore, Okla., Niehaus 3, T. J. Chambers sur, 400 ft S No. 2. Texas Petroleum Dev. Co., Box 809, Cameron, Texas, W. M. Phillips 7, W. M. Phillips sur, 400 ft W No. 4.

Matagorda County — Humble Oil & Ref. Co.'s, Houston, Texas, Smith 1-A, Perry & Smith sur, 250 ft to N and W lines.

Navarro County—J. K. Hughes Dev. Co.'s,

Mexia, Texas, T. H. Alexander 11, Jas. Smith sur, 450 ft to S and E lines; 12, same sur, 100 ft SW No. 11. Humble Oil & Ref. Co.'s, Houston, Texas, W. C. Humphries 33, Hrs. J. Smith sur, 150 ft W No. 25; 30, same sur; 32, same sur, 150 ft to W and 200 ft to S line. Pure Oil Co.'s, Mexia, Texas, R. Kent 15, Hrs. J. Smith sur, 404 ft NE No. 11. Cranfill & Reynolds Inc.'s, Box 411, Corsicana, Texas, W. C. Clements 1, Hrs. J. Smith sur, 150 ft to N and 50 ft to E line. E. L. Smith Oil Co.'s, Mexia, Texas, L. M. Moore 1, J. B. McDaniels sur, 150 ft to S and E lines.

Palo Pinto County—Zadie Belle Oil Co.'s, Box 36, Mineral Wells, Texas, H. Belding 1, S 6, Mrs. A. R. Chatmes sur. New Era Oil Synd.'s, Stephenville, Texas, S. L. Stephens 1, B 16, A. Townesend sur, 150 ft to S and E lines.

Reagan County—Big Lake Oil Co.'s, Best, Texas, University 26, S 25, B 9, 660 ft to S and W lines. Krupp & Pickrell's, Big Lake, Texas, University 3, S 36, B 9.

Shackelford County—Roy McCarter's, Cisco, Texas, S. S. Diller 9, S 42, Insane Asy sur, NW Cor. Raney & West's, Box MM, Breckenridge, Texas, Jeter 1, S 14, T&P Ry sur, 300 ft to W and 150 ft to S line; 2, same sur, 300 ft E No. 1. B. C. Lacey's, Breckenridge, Texas, J. M. Isenhour 1, B 11, N. R. Reister sur, 800 ft to E and 810 ft to S line. C. H. Wolf's, Electra, Texas, C. F. Brown 1, S 67, Insane Asy sur, 150 ft to N and 750 ft to W line.

Stephens County—Texas Co.'s, Breckenridge, Texas, Mrs. S. Houston 4, 2089 TE&L sur, 660 ft to N and W lines; L. F. Grimes 2, 3394 TE&L sur, 330 ft to E and 1000 ft to S line. Magnolia Pet. Co.'s, Dallas, Texas, B. S. Walker 6, S 27, Insane Asy sur, 325 ft to N and 400 ft to E line.

Sterling County—Adkisson & Pettit's, Magnolia Bldg., Dallas, Texas, C. C. Reynolds 1, S 8, H&TC Ry sur, 1320 ft to N and 660 ft to W line.

Throckmorton County—Texhoma Oil & Ref. Co.'s, Houston, Texas, A. M. Graham 1, 2317 TE&L sur, 150 ft to S and E lines.

Wichita County—Texhoma Oil & Ref. Co.'s, Wichita Falls, Texas, S. B. Burnett 4, S 6, G. R. Meade sur, 986 ft S No. 3. Murchison & Pigg's, Vernon, Texas, Foster & Allen 4, B 833, Denison sur, 150 ft to E and 750 ft to S line. Roberts & Hill's, Wichita Falls, Texas, Mrs. S. Mitchell 1, P. Castleman sur, 150 ft to N and E lines. Underwood Drilling Co.'s, Morgan Bldg., Wichita Falls, Texas, Mrs. S. H. McCarty 8, S. O. Fowler sur, 500 ft W No. 7. Petroleum Prod. Co.'s, City Nat. Bank Bldg., Wichita Falls, Texas, M. Staniforth 14, N. B. Balch sur, 300 ft S No. 12. R. R. Clark, 2001 Lucille St., Wichita Falls, Texas, Tri-Mutual 9, B 4, Ward & Todd sur, 150 ft to E and 480 ft to S line. Rio Bravo Oil Co.'s S. P. Bldg., Houston, Texas, Fee E-8, S 31, H&TC Ry sur, 150 ft to W and 725 ft to S line. Ross Oil Co.'s, Box 1464, Wichita Falls, Texas, H. A. Waller 4, S 6, T. C. S. L. sur, 300 ft N No. 1. H. E. Wilcox's, 1658 Lucille, Wichita Falls, Texas, S. G. Banks 1, C. T. Ry sur. W. E. Timblin et al's, Wichita Falls, Texas, H. Willis 2, BBB&C Ry sur, 300 ft E No. 1. Magnolia Pet. Co.'s, Dallas, Texas, H. Reilly 115, J. B. Johnson sur, 750 ft to N and 200 ft to W line. Griswold Oil Corp.'s, Wichita Falls, Texas, L. C. Denny 13, H. B. Balch sur, 300 ft NW No. 5; J. E. Parker 10, B 9, P. P. C. S. L. sur, 550 ft to N and 750 ft to E line. Buerbaum & Davis', 828 West 18th St., Dallas, Texas, Fee 1, T. E. Williams sur, 240 ft to N and 250 ft to W line. W. L. Mann's, 710½ Ohio St., Wichita Falls, Texas, Roller Est. 16, J. Johnson sur, 300 ft W No. 10.

Wilbarger County—Electra-Texas Oil Co.'s, Box 66, Vernon, Texas, W. T. Waggoner 2, B 42, H&TC Ry sur, NW cor. Upham Gas Co.'s, Mineral Wells, Texas, W. T. Waggoner 1, S 47, H&TC Ry sur, 150 ft to S and W lines. South Vernon Oil Co.'s, Vernon, Texas, W. H. Stephens 16, S 83, H&TC Ry sur, 300 ft W No. 14. Mattylee Lippard's, Wichita Falls, Texas, W. T. Waggoner 1, S 48, H&TC Ry sur, 150 ft to E and 2523 ft to S line; W. T. Waggoner 1, S 53, H&TC Ry sur, 150 ft to

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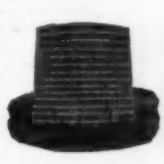

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E and 1170 ft to S line. Bridwell, Heydrick & Palmer's, Wichita Falls, Texas, S. A. Dill 6, S 84, H&TC Ry sur, 50 ft N No. 5; 7, same sur, 50 ft W No. 4; W. H. Stephens 9, S 83, H&TC Ry sur, 50 ft E No. 5. M. V. Smith's, Box 1082, Wichita Falls, Texas, Waggoner Est. 1, S 35, H&TC Ry sur, 300 ft to N and 150 ft to E line. Castlebury Farm Oil Co.'s, Wichita Falls, Texas, R. L. Castlebury 3, S 83, H&TC Ry sur, 474 ft E No. 2; 4, same sur, 405 ft E No. 3; 5, same sur, 150 ft to N and E lines; 6, same sur, 375 ft E No. 4; 7, same sur, 375 ft E No. 6. Whiburt Oil Corp.'s Staley Bldg., Wichita Falls, Texas, Waggoner Est. 1, S 23, H&TC Ry sur, 150 ft to N and E lines; 1, S 8, H&TC Ry sur, 150 ft to S and W lines. States Oil Corp.'s, Box 957, Eastland, Texas, W. T. Waggoner 1, S 13, H&TC Ry sur, 150 ft to N and E lines. Staley & Wynne's, Staley Bldg., Wichita Falls, Texas, W. M. Walker 1, S 14, H&TC Ry sur, 150 ft to N and W lines; W. T. Waggoner 1, No. 4 H&TC Ry sur, 150 ft to N and W lines. Acme Oil & Gas Co.'s, Delta, Colo., S. Zeiset 1, S 24, H&TC Ry sur, 1000 ft to E and 150 ft to S line. Atlantic Oil Prod. Co.'s, Magnolia Bldg., Dallas, Texas, C. Zipperle 4, S 80, H&TC Ry sur, 300 ft S No. 2

Webb County—J. W. Pippin's, Hebbronville, Texas, El Randado 3, No. 291 sur, North Central part of Blk. 19. T. G. Binney's, Box 738, Laredo, Texas, Los Ojuelos 4, No. 592, Blk 9, 150 ft to N and 1055 ft to W line.

Waller County—G. M. Gordon's, Hempstead, Texas, M. A. Dodd 1, S 15, H&TC Ry sur, West central.

Young County—Multiple Oil Co.'s, Box 744, Wichita Falls, Texas, G. B. Hamilton 5, I. Holman sur, 300 ft W No. 3; 6, same sur, 300 ft S No. 3; 4, same sur, 300 ft S No. 2. Texas Co.'s, Wichita Falls, Texas, W. E. Gambrell 20, BBB&C Ry sur, 150 ft to N and 812 ft to W line; 21, same sur, 150 ft to W and 3653 ft to S line; 22, same sur, 1143 ft to W and 4303 ft to S line; 23, same sur, 481 ft to W and 3978 ft to S line. Panhandle Ref. Co.'s, Wichita Falls, Texas, W. E. Gambrell 3, S 1, BBB&C Ry sur, 331 ft E No. 2. Sun Oil Co.'s, Dallas, Texas, R. E. Rogers 1, I. Holman sur, 151 ft to N and E lines. Sinclair Oil & Gas Co.'s, Ft. Worth, Texas, L. P. Moren 4, Jas Rose sur, 600 ft E No. 1. Hamilton & Wilson's, Waggoner Bldg., Wichita Falls, Texas, H. Haygood 4, 237 TE&L sur, 300 ft S No. 3. Simms Oil Co.'s, Magnolia Bldg., Dallas, Texas, J. D. Carpenter 5, 237 TE&L sur, 550 ft to E and 860 ft to S line; 6, same sur, 505 ft to N and 150 ft to E line. Texhoma Oil & Ref. Co.'s, Wichita Falls, Texas, W. E. Gambrell 9, BBB&C Ry sur, 300 ft S No. 5.

Continental Supply Names South American Salesman

Casper, Wyo., April 20.—Lewis C. Klein of Casper has been named South American representative of the Continental Supply Company and is now en route to St. Louis, the company headquarters, from where he will proceed to his new work. Venezuela will be headquarters for Mr. Klein.

For the last five years district manager at Casper for the Continental, Mr. Klein has been active in developing the oil supply business in the Rocky Mountain region and has been a director of the Rocky Mountain Oil and Gas Association. He has followed the oil business through Pennsylvania, Ohio, Illinois, Oklahoma, Kansas, West Virginia and Ohio, having started in with the Petroleum Supply Company in 1907 in the Ohio fields.

WILDCATS FROM ALL SECTIONS

Small Producers Reported By North Texas Wildcatters

Wichita Falls, Texas, April 20.—Showing oil, gas and water from sand pay at 1841-44 feet, Bruce Larkin-Panhandle Refining Company and others' wildcat test on the Mrs. T. S. Richards land in the south central part of Throckmorton County, gives promise of making about 15 barrels when placed on the pump. This well is located in lot 23, A. J. Morgan survey, about six miles southwest of the town of Throckmorton, and tested an initial flow of 20,000,000 cubic feet dry gas last February at 1275 feet, but water broke in and drowned out the heavy gas flow. The same interests completed a small oil pumper last August on the H. E. Conger land, section 943, Premium Surveys, from sand at 1448-54 feet, and this production is about six miles due east of the new discovery, thereby giving Throckmorton County two small shallow oil pumpers.

The deep oil pay uncovered in eastern Throckmorton County last September by Humble Oil and Refining Company on the Stubblefield land, section 991, with an initial production of 50 barrels from lime at 3190-97 feet after passing up a small oil pumper from sand at 2964-79 feet, is furnishing about 20 barrels daily. An east offset to this producer is to be drilled in this week by the Reiter-Foster Oil Corporation's Stubblefield, which encountered the top of the big lime at 2947 feet, or two feet higher than Humble's well. Big casing has been pulled from the Reiter-Foster test, and the pay is expected after drilling through about 15 feet of lime.

The Humphreys Corporation brought in its third shallow oil pumper in the Nocona field, Montague County, last week with an initial production of 55 barrels of oil and traces of water from sand pay at 821-43 feet, after plugging back from 847 feet. This well is on the N. J. Howard farm, John Chambliss survey, and extended the oil area about three-quarters of a mile to the north of the discovery well. Texhoma Oil and Refining Company's J. E. Lemon 1 has been completed making 2,500,000 cubic feet dry gas at 720-47 feet. Gulf Production Company's L. E. Benton 2, located in wildcat territory and east of Nocona, is drilling below 2980 feet, and is scheduled to reach the expected deep pay before the close of the present week.

Tennessee Wildcats

CLAY-JACKSON COUNTIES—DaFoe & Co. No. 1 Oglethorpe, No. 2 Draper, No. 1 Ben Hix, No. 3 Ham Lynn, Chicago parties arranging to start five tests and numerous others are getting material for development work.

SCOTT COUNTY—Superior Oil Corp, No. 2 Bryant, drilling.

MACON COUNTY—Catson & Co., drilling No. 1 Jim Hays in center of county.

OVERTON COUNTY—W. H. Boswell drilling No. 1 on Mitchell Creek.

RHEA COUNTY—Unknown Parties have rig up near town of Dayton.

HAMILTON COUNTY—Dryden & Co., rig in near town of Daisy.

FAYETTE COUNTY—M. A. Strickland & Co. have rig in on the Joe Perry lease near Sommerville.

BENTON COUNTY—Unknown Parties have rig up near Camden and Benton Oil & Gas Co., has rig up near town of Eva.

HARDEMAN COUNTY—Spring Valley Development Co. drilling on Brown Sans lease, near Bolivar.

MADISON COUNTY—Cincinnati Oil Co., has rig up on Judio Howard lease, near Jackson.

OHIO COUNTY—Richards & Miller drilling on M. A. Gauldin lease near Trimble.

SUMNER COUNTY—Dr. A. T. Sims drilling No. 2 Terrell-Stewart lease, near Gallatin.

GIBSON COUNTY—Rinehart Oil Corp. drilling No. 1 Holt lease, near Dyer.

Alabama Wildcats

MADISON COUNTY—P. J. Mahoney drilling wildcat near Hunterville.

LAWRENCE COUNTY—Tulsa Parties arranging to start drilling near town of Mounton.

CLARKE COUNTY—Keoigghan & Co. drilling in the vicinity of McCorquedate, and the Inter-Coastal Oil Co. drilling No. 1 on the Hatchigbee Anticline.

WILCOX COUNTY—Blue Bell Oil Co., drilling near Selma.

SHELBY COUNTY—Cooksey Oil Co., drilling on the Scott lease, near Chelasea.

HALE COUNTY—Hale Oil Co. drilling near Greensburg.

SUMPTER CUNTY—Sam W. Kendall drilling near Cartopa.

BALDWIN COUNTY—Stoll & Co., drilling No. 1 R. A. Evans lease, near Bay Minette.

MORGAN COUNTY—Albany-Decatur Oil & Gas Co., drilling No. 1 J. English lease, near Albany.

North Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Baylor County—		
J. L. Bussel et al Fee 1	*	2060
E. M. Jones et al J. W. Stevens 1.	*	1825
Clay County—		
Shelton Oil Co. H. Boddy 1	*	1375
Cooke County—		
Big Indian Oil & Dev. Co. Davis 1, dd	25	3529
Chas. Pettit et al Ed Nelson 1 . . .	†	2620
Montague County—		
Humphreys Corp. N. J. Howard 1	55	847
Texhoma Oil & Ref. Co. J. E. Lemon 1	¶2½	747
Wilbarger County—		
Atlantic Oil Prod. Co. et al Waggoner-Reeves 1, dd	*	2424
Knight-Hines et al Waggoner 3 . . .	†	820

DRILLING REPORT

BAYLOR COUNTY—Continental Oil Co. & Monroe's Stevens 1, dr 1650 ft. Dallas Oil Co.'s Shawver 1, sd 1885 ft. W. H. Dyer et al's Cox 1, sd 950 ft. Duke & McKee's J. Dipprey 1, dr 1630 ft. Grebin & Sullivan's Anderson 1, dr 1000 ft. Lehman et al's Shawver 1, sd 1160 ft. J. R. McCaldin et al's Martin 1, dr 1550 ft. A. T. Strong et al's Young 1, dr 1235 ft. Southern Exploration Co.'s Michna 1, lcn.

CLAY COUNTY—Mills Bennett et al's E. L. Holloway 1, dr 1525 ft. P. F. Gwynn et al's Saner-Lomax 1, rig. Lone Star Gas Co.'s Magnolia Pet. Co. Fee 2, dr 400 ft; Martin 23, rig. Mitchem & Logan's J. Y. Sneed 1, dr 700 ft. John O'Neil et al's J. F. Alcorn 1, rig.

COOKE COUNTY—Leonard & Jones' Hamilton 1, sd indefinitely 1885 ft. W. J. Rawson-Lyles et al's Cecil Aldridge 1, sd 2725 ft. Red River Drilling Co.'s Jones 1-A, sd 1780 ft.

DENTON COUNTY — Galloway & Co.'s Dollenger 1, sd 885 ft. Gainesville Synd.'s Kate Fontenberry 1, fsh 1380 ft.

FOARD COUNTY—The Texas Co.'s McCoy 1, lcn.

GRAYSON COUNTY—The Texas Co.'s G. W. Cannon 1, dr 1840 ft. Clopton & McMahon's Ida Thorn 1, sd for water 1385 ft. H. H. Johnson et al's Marshall 1, sd 1100 ft. Whitesboro Oil & Dev. Co.'s Jewell-Anderson 1, dr 1350 ft.

MONTAGUE COUNTY—Blair et al's C. L. Rolls 1, lcn. Daniels-Rutis & Panhandle Ref. Co.'s M. H. Salmon 1, dr 335 ft. Gulf Prod. Co.'s L. E. Benton et al 2, dr 2980 ft. Humphreys Corp.'s J. W. Maddox 4, lcn; W. W. Jones 2, dr 225 ft. Nocona Gas Co.'s R. Hinds 2, rig. Owenwood Oil Corp.'s Salmon 1, sd 1160 ft. The Texas Co.'s N. J. Howard 1, star machine. Texhoma Oil & Ref. Co.'s N. J. Howard 4, dr 1060 ft.

WILBARGER COUNTY—D. H. Allday et al's W. S. Lundy 1, dk. C. Andrade et al's Archer 1, sd 425 ft. F. A. Beatty et al's Waggoner 1, sec 47, dr 1480 ft; Waggoner 1, sec 15, rig. Bridwell & Heydrick's Waggoner 1, dr 2315 ft; McCrary 1, show oil 940-50 ft, dr 1010 ft. B-H & Texas Pacific Coal & Oil Co.'s Waggoner 1, ur 2050 ft. Burton-Ruff & Empire Gas & Fuel Co.'s Waggoner 1, sd for water 1680 ft. Bob Brewer et al's Schmoker 1, dr 880 ft. E. A. Durham et al's Waggoner 1, sd for water 700 ft; Waggoner 2 and 3, rigs. J. W. Dyson et al's Waggoner 1, dr 995 ft. Electra-Texas (was Noble Oil Co.'s Waggoner 2, rig. H. F. Gibson et al's Waggoner 1, rig. Wood W. Graham et al's M. J. George 1, sd 1520 ft. Gulf Prod. Co.'s Waggoner 1-S, fsh with hfw 2608 ft; Waggoner 1-U, dr 1365 ft; Zipperle 1-A, dr 1175 ft. Hoffer Oil Corp. et al's Waggoner 1, sec 43, blk 2, lcn. Dan Holmes et al's Richardson 1, dk. Humble Oil Ref. Co.'s Waggoner 1-C, fsh collapsed cas 2185 ft. Herbert Oil Co.'s Waggoner 1, spudding. T. A. Key et al's Waggoner 1, ur 2080 ft. Knight-Hines et al's Waggoner 1, testing oil pay 1968 ft; Waggoner 2, rig; Waggoner 3, rig; Waggoner 4, dr 1000 ft. J. B. Levy et al's Waggoner 2, show oil 1840-42 ft, dr 1855 ft; Waggoner 1, blk 4, co 500 ft; D. Wheeler 1, sd 2056 ft. Lippard Oil Co.'s Fluhman 1, testing oil pay 1798 ft. M. Lippard et al's Waggoner 1, dr 1240 ft; Waggoner 2, spudding. Little Oil Co.'s Youngblood 1, sd 2285 ft. E. A. McKanna et al's Waggoner 1, sec 48, fsh tools 700 ft; Waggoner 1, sec 31, dr 600 ft. Maer-Staniforth et al's Waggoner 1, sec 4, rig; Waggoner 1, sec 10, lcn. Maxwell-Weekley et al's Morris 1, dr 1400 ft. Murchison-Fain et al's Waggoner 1, dr 2105 ft. McCamey-Sherrin et al's Waggoner 1, dr 740 ft. Magnolia Pet. Co.'s Moore-Waggoner 1, ur cas 1455 ft. McLester Oil Co.'s Waggoner 1, spudding. Montex Oil Co.'s Waggoner 1, spd and sd. Panhandle Ref. Co.'s Key 1, dr 360 ft. Quarker Oil Co.'s Waggoner 1, rig. C M. Root et al's McCrary 1, dr 1600 ft. J. F. Shipley et al's B. W. Murphy 1, co 1065 ft. W. A. Smith-Kleeden et al's Castleberry 1, sd 1100 ft. Shaw-Edgar et al's Waggoner 1, rig. Simms Oil Co.'s Collins 1, dr 960 ft. Shamrock Oil Co.'s Waggoner-Brownlee 1, dr 730 ft. South Vernon Oil Co.'s Zipperle 1, dr 610 ft. Texhoma Oil & Ref. Co. & Burton's Waggoner 1, rig. Texhoma & Holmes' Flanniken 1, dr 1040 ft; Mrs. A. Thomas 1, dr 1630 ft. The Texas Co.'s Castleberry 1, ur 2270 ft; J. L. Owens 1, fsh 1232 ft; Waggoner 202, dr 2490 ft. W. D. Wells et al's Waggoner 1, dr 1200 ft. G. Clint Wood et al's McGill 1, dr 380 ft; Swim 1, dk. Whibert Oil Corp.'s Waggoner 1-B, spudding; Waggoner 1-C, rig; Waggoner 1-D, lcn. The Ppham Co.'s Waggoner 1, dr 480 ft.

East Central Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Franklin County—		
Arkansas Fuel Oil Co. H. W. Tittle 1, (T. Willison sur)	*	1560
Hunt County—		
Rycade Oil Corp. D. Lyttle 1, (Jas. McAdams sur)	*	3500
Navarro County—		
Simms Oil Co. W. N. Smith 1, (M. Autry sur)	*	3046
Van Zandt County—		
Free State Oil Co. J. T. Dunbar 1, (Van Sickle sur)	*	3710

DRILLING REPORT

FALLS COUNTY — Harrison-Bletch & Thompson's B. & T. 1, (W. A. Mitchell sur) top Austin chalk 2583 ft, dr 2655 ft. Reiter-Foster Oil Corp. et al's L. T. Williams 1, (J. W. Robinson sur) sd indefinitely 879 ft.

HUNT COUNTY—Marland Oil Co. et al's P. Bauknight-Fee 1, (J. Hamilton sur 22) dr hard lime 3720 ft. Sam Tallal & C. A. Kelsey's J. W. Barnett 1, (Alex Smith sur) dr 1870 ft.

KAUFMAN COUNTY—F. E. Skinner & Atlantic Oil Prod. Co.'s W. F. Becker (79-acre lease) 1, (T. H. Eaton sur) spudding. Humphreys Corp. et al's Britton 1, (T. Devore sur) lcn.

LIMESTONE COUNTY—Bains Creek Oil Co.'s Kennedy 1, top Austin chalk 2624 ft, dr 2730 ft. Leak et al's Stitt 1, sd 3050 ft. Eisennayer et al's Baker 1, dk. DeArmond et al's Welsh 1, Austin chalk 2257-2570 ft, dr 2900 ft. Magnolia Pet. Co.'s R. Kennedy 1, spudding. Pure Oil Co.'s J. W. Webster 1, dr lime 3505 ft.

MILAM COUNTY—Magnolia Pet. Co.'s M. M. Kime 1, (S. P. Carson sur) dr 150 ft.

NAVARRO COUNTY — Gulf Prod. Co.'s A. Hilburn 1, (W. M. Hudson sur) rig. Gulf & Kirby Pet. Co.'s Mattie Green 1, (Bazette Dist.) Austin chalk at 2182-2628 ft; elevation 386 ft, coring Woodbine sand 3067 ft. Elliott & Nicolle's Westbrook 1, (Kerens Dist.), running cas 3411 ft. Strotman et al's E. Bounds 1, sd 3105 ft. Richardson & McAllister's Mulligan 1, dr 3185 ft.

RAINS COUNTY—Texas Pacific Coal & Oil Co.'s A. A. Humphreys 1, (J. H. Garrett sur) Pecan or Austin chalk at 2275-2314 ft, dr shale 2655 ft.

ROBERTSON COUNTY—Reiter-Foster Oil Corp. et al's W. M. Hill 1, (John Welch sur) lcn.

TITUS COUNTY — Magnolia Pet. Co.'s George Antone 1, (near Talcy) dr 2975 ft.

VAN ZANDT COUNTY—J. E. Walsh-Al Merrick et al's W. E. Simpson 1, (John Welch sur) lcn.

Texas Panhandle Wildcats

CARSON COUNTY — American Ref. Co.'s Burnett 1-C, dr 1500 ft. Crosbie Oil Co.'s Burnett 2, dr 1975 ft. Culbertson et al's V. B. Armstrong 1, plugged back from 3560 ft and shut down for shot 3100-60 ft. Gulf Prod. Co.'s Burnett 6, co after plugging back from 3055 to 2984 ft; Burnett 7, dr 2840 ft; Burnett 8, dr 2010 ft. Hicks & Schoonmaker's Burnett 1, rig. Magnolia Pet. Co.'s Burnett 1, dr 740 ft. Olson Bros. et al's Burnett 1, sd 2970 ft. Premier Oil Corp.'s Burnett 1, sd 2860 ft. W. W. Silk et al's Burnett 4, setting 20-inch cas 200 ft; Burnett 5, lcn. The Texas Co.'s Burnett 5, show water dr granite wash 2890 ft; Burnett 6, rig; M. C. Burnett 2-A, spraying 50 bbls oil 2904-10 ft, td 2960 ft; M. C. Burnett 3, dr 950 ft.

COTTLE COUNTY—T. J. Woodley et al's A. Dulaney 1, sd for water 2935 ft.

COLLINGSWORTH COUNTY — Holman Cook-J. T. Cobb et al's sec 74, blk 11, lcn.

DICKENS COUNTY—Mickels et al's Pitchfork 1, sd 350 ft.

GAINES COUNTY—J. J. Mundy et al's M. C. Lindsey 1, materials.

GRAY COUNTY—A. R. Anderson-Bock et al's Beavers-Bradford 1, making gas dr 2590 ft. C. H. Clark et al's Coombs-Worley 1, showing oil dr 2815 ft. Danciger Oil Ref. Co. J. B. Bowers 1-A, sd fuel 2290 ft. W. H. Holmes' J. B. Morse 2, sd for shot at 2705-15 ft, td 3147 ft. Wilcox Oil & Gas Co.'s Coombs-Worley 2, dr 2100 ft.

HUTCHINSON COUNTY — Amarillo Oil Co.'s L. Bivins 2-B, dr 2900 ft. R. G. Barnum et al's Johnson Bros. 1, testing oil pay 3016-22 ft, td 3055 ft. W. T. Coble et al's J. A. Whittenburg 1, rigging up rotary 330 ft each way from SW corner of NW¼ sec 12, M. & C. survey, blk "Y". Dixon Creek Oil Co.'s Smith et al 2, rig. Gulf Prod. Co.'s Dial-Perkins 2, dr 200 ft. J. H. Middleton et al's J. Weatherly 1, spd and sd. New Domain Oil & Gas Co.'s L. E. Barton 1, rig burned, td 2690 ft. Panhandle Ref. Co. et al's Dial-Perkins 1, dr (rotary) 1240 ft; Dial-Perkins 2, lcn; J. A. Whittenburg 1, lcn. Prairie Oil & Gas Co.'s D. Shaw 1, dr 3340 ft. Western Enterprise Oil & Gas Co.'s Smith et al 2, lcn in SE corner SE¼ of SW¼ of NW¼ sec 8, M. & C. sur blk "Y".

MOORE COUNTY—Amarillo Oil Co.'s Masterson 1-A, re-bldg burned dk, td 2320 ft.

POTTER COUNTY—Amarillo Oil Co.'s J. C. Warrick 1-A, sd 3030 ft; W. H. Bush 1, fsh cas 3496 ft.

ROBERTS COUNTY—Phil Engle et al's Lederick 1, ur cas 2050 ft.

WHEELER COUNTY—Angus et al's Ember 1, rig. Globe Oil Co.'s Williams & Laycock 1, lcn is 330 ft from NW corner S½ of SW¼ sec 20, blk A-8, H. & G. N. sur. W. D. Sheddon et al's B. F. Westmoreland 1, sd 1100 ft. Texhoma Oil & Ref. Co.'s J. H. Jackson 1, spudding; Jackson 1-A, rig. Nobles Oil Co.'s Nobles 1, lcn is 600 ft south of discovery well, sec 9, blk 27. Vaughan & Pendleton's P. W. Krey 1, dr 1100 ft. J. O. Whittington et al's Williams & Laycock 3, running 6⅝ cas 2154 ft; W. & L. 4, dr 2060 ft; G. W. Porter 1, rig.

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Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Brown County—		
Mendenhall et al Newton 3	75	1261
McMurray et al Newton 4.....	100	1287
Reagan County—		
Big Lake Oil Co. University 18, C SW sec 25, blk 9 8753		2928
Texon Oil & Land Co., University 2, C SW SEc 26, blk 9	*	3185

DRILLING REPORT

BROWN COUNTY—Canyon Oil & Gas Co. et al's Ellsberry 3, sd 600 ft. Gillman et al's Newton 9, rig. Gillman & McMurray's Teston 2-A, dr 410 ft; Teston 3, rig. Gillette et al's Prather 3, lcn. Prairie Oil & Gas Co.'s Gaines 4, spudding; Newton 6, lcn; Newton 8, sd 1238 ft; Newton 9, rig; Newton 10, lcn. Mendenhall et al's Newton 4, lcn. Moore et al's Gafford 1, rig. Moore & Wilson's Gafford 2, rig; Gafford 3, lcn; Westerman 3, rig. McMurray et al's Newton 5, lcn. Rhoades & Higher's Prather 5, dr 510 ft.

CALLAHAN COUNTY — Byron-Union Oil Co.'s Hennesey 1, dd, dr 4600 ft. Seaboard Oil & Gas Co.'s Isenhower 3-A, fsh 1035 ft. Urban et al's Alvord 1, sd 2425 ft.

COLEMAN COUNTY—Canyon Oil & Gas Co.'s Morris 1, spudding. D. R. Bailey et al's Kelly Grady 1, sd 910 ft.

PALO PINTO COUNTY — Burton-McKee Oil Corp.'s Strawn Coal Co. Fee 4, dr 2120 ft. J. D. Cranford & Singleton's L. Smith 1, dr 1960 ft. Cameron & Anderson's Pollard 2, sd 1700 ft. Webb Dalton et al's Perkins 1, showing gas 727-35 ft, dr 815 ft. Hart et al's Card-

well 1, dr 1415 ft; Cardwell 2, machine. Hart Oil Corp.'s Orme 1, sd 900 ft. Hughes et al's Weldon 2, sd 4370 ft. Little Caddo Oil Synd.'s Massie 2, dr 1515 ft. Owens & Burkett's Chestnut 1, sd for cas 3690 ft. Pender Prod. Co.'s Rasmussen 1, dr 500 ft. Scott & McCluer's Wheeler 3, sd 3715 ft.

PARKER COUNTY—English et al's Peters 1, sd 826 ft. G. E. LaBaume et al's Evans 1, sd 2100 ft.

BREWSTER COUNTY—Green Valley Oil Corp.'s W. A. Wilson 3, dr 1850 ft.

COKE COUNTY—West Virginia Oil Marketing Assn.'s J. R. Mims 1, dr 2450 ft.

CONCHO COUNTY — Dome Prod. Co.'s Mrs. Hartgrove 2, fsh 1230 ft.

CRANE COUNTY — Penn-Tex Dev. Co.'s Jax Cowden 1, rig.

CROCKETT COUNTY—J. S. Cosden et al's University 1, sec 34, blk 12, running 6⅝ cas 2725 ft. World Co.'s L. P. Powell 1, dr 2480 ft. Red Ball Oil Co.'s University 1, sec 5, blk 29, rig. Shaffer et al's University 1, sec 13, blk 47, lcn.

CULBERSON COUNTY — The California Co.'s Grisham Bros. 1, lcn. Grisham Bros. et al's Grisham 1, lcn.

GARZA COUNTY—Gulf Prod. Co.'s Slaughter 1, lcn. Armeda Oil Co.'s J. M. Boren 1, sd 2443 ft; Connell 1, sd 600 ft. McDaniel-Mitchell et al's Connell 1, sd 2615 ft. S. A. Sloan et al's Connell 1, rig.

GLASSCOCK COUNTY—Gulf Production Co.'s L. S. McDowell 1-C, set 6⅝ cas gray lime 3547 ft.

HOWARD COUNTY—Fred Heyer et al's H. R. Clay 1, center SE¼ sec 139, blk 29, lcn.

IRION COUNTY—Chas. Denny et al's D. E. Hughes 1, dr 750 ft. W. A. Stout et al's J. D. Sugg 1, sd indefinitely 1830 ft.

KENT COUNTY—Marland Oil Co. et al's F. E. Kuteman 1, dr 900 ft.

LOVING COUNTY—P. V. Petroleum Co.'s N. E. Chapman 1-A, sd 800 ft.

MITCHELL COUNTY—Eastland Oil Co.'s W. D. Keynard 3, dr 2770 ft. Eastland & Atlantic Oil Prod. Co.'s J. W. Clark 1, setting cas 2715 ft. The California Co.'s Paul Elder 1-A, cemented cas 2736 ft; Elder 2, dr 500 ft; Elder 3, dr 700 ft; Morrison 13, rig. Eddleman et al's A. C. Gist 1, sd 3410 ft. Morrison & Fairchilds' M. E. Towles 1, rig. Morrison & Thompson's C. M. Adams 1, dr 2610 ft; Womack 1, lcn. Sloan et al's Scott 1, showing oil and gas 774-76 ft; Sam Smart 6, dr 1150 ft; Smart 7, dr 1310 ft. West Texas Pet. Co.'s H. C. Miller 4, dr 1800 ft. J. P. Harris et al's W. C. Brown 2, sd repairs 430 ft.

PECOS COUNTY—Gulf Prod. Co.'s White-Baker 1, sec 85, blk 194, dr 2335 ft. Adams Oil Co.'s Devlin 1, sd 640 ft. Plymouth Oil Co.'s Perry Ranch 1, dr 2700 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 16, C SE sec 1, blk 2, dr 2944 ft; University 17, dd, C NE sec 1, blk 2, mudding off gas with rotary 2435 ft; University 19, C SE SE sec 12, blk 2, dr 2500 ft; University 20, C SW SW sec 25, blk 9, co 2464 ft; University 22, C SE NE sec 1, blk 2, fsh 2280 ft; University 23, C NE SE sec 1, blk 2, running 6⅝ cas 2669 ft; University 24, C SE SE sec 1, blk 2, co 2792 ft; University 25, C SE SW sec 25, blk 9, sd 2510 ft; University 26, C SW SE sec 25, blk 9, dr 70 ft; University 27, NW corner NE NE sec 1, blk 2, rig; University 28, SW corner SE SE sec 25, blk 9, rig; University 29, SE corner sec 25, blk 9, rig. The California Co.'s University 1, sec 13, blk 8, dr 3665 ft. B. H. Cogdell et al's University 1, sec 23, blk 8, spd and sd. W. H. Dunning et al's J. D. Sugg 1, center sec 85, T. & P. sur, blk 2, materials. Gulf Prod. Co.'s University 1, NW corner sec 1, blk 1, dr lime 960 ft. P. H. Hoffman et al's University 1, sec 23, blk 11, making salt water 2905 ft. McCamey-Johnson et al's University 1, SE SW sec 13, blk 9, dr 2600 ft. H. B. McGuire et al's C. W. Merchant 1, sec 12, L. S. & V. Ry sur, blk "A", sd 2175 ft. J. T. Stover et al's University 1, sec 34, blk 11, sd 200 ft. Texon Oil & Land Co.'s University 6-A, C NW NW sec 36, blk 9, dr 2645 ft; University 7-A, C SW NW sec 36, blk 9, testing 6⅝ cas seat

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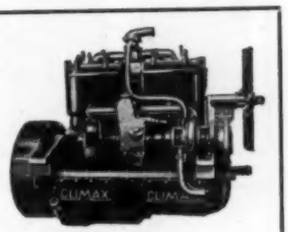

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2842 ft; University 8-A, C NW SW sec 36, blk 9, dr 2805 ft; University 10-A, C NE NW sec 36, blk 9, dr 520 ft; University 11-A, C NW NE sec 36, blk 9, dr 540 ft; University 12-A, C SE NW sec 36, blk 9, dr 705 ft; University 13-A, C NE SW sec 36, blk 9, rig; University 14-A, C SE SW sec 36, blk 9, rig; University 3-B, C NW SW sec 35, blk 9, dr 3040 ft. University Oil Co.'s University 1, sec 17, blk 10, sd 2795 ft.

STERLING COUNTY — Chicago-Texas Oil & Gas Co.'s D. C. Durham 1, sd 2030 ft; Durham 2, pumping 5 bbls oil 1406 ft. Pettit & Adkisson's C. C. Reynolds 1, dr 280 ft. Co-Operative Lease & Dev. Co.'s Douthitt 1, sd 2250 ft. Bushnell & Krous et al's J. J. Dennis 1, lcn. Geo. Northrup et al's Elwood 1, sec 59, blk 18, spudding. Kanawah-Angelo Oil Co.'s L. T. Clark 1, sd for 15½ cas 450 ft. Ford & Cogdell's W. L. Foster 1, sd 1820 ft. Chas. L. Harty et al's Reynolds 1, sec 43, blk 2, lcn. Wrightsman et al's W. L. Foster 1, lcn.

UPTON COUNTY — Big Mesa Oil Co.'s University 1, sec 17, blk 3, running cas 365 ft. Bell-Regan et al's University 1, sec 2, blk 4, dr 410 ft. Suggs & Chancellor's University 1, sec 6, blk 4, spd and sd. W. P. Morris et al's H. M. Halff 1, sd 445 ft.

Coastal Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Jefferson County—		
Houston Oil Co. Sun Davis 1....	†	1576
Wharton County—		
Gulf Prod. Co. Hackstedt 1	*	2200

DRILLING REPORT

ANGELINA COUNTY—Ferdinand Heine's Henderson-Ellison 2, J. H. Ellison sur, blk 11, 200 ft to W and 150 ft to S line, reported dr below 450 ft; S. W. Henderson 3, blk 11, J. H. Ellison sur, 200 ft to W and 450 ft to S line, dr 235 ft.

BRAZORIA COUNTY—D. F. Bryan Prod. Co. & Hamm et al's Bryan 1, at Freeport, J. G. McNeel sur, dr 3520 ft. Z. Gayle et al's Gayle & Dunsmoor 2, W. J. Russell sur, ¾ mile E No. 1, 6 miles S Angleton, installing heavy rig.

BRAZOS COUNTY—Bryan Pet. Co.'s Watthuber 1, 2 miles S College Station, C Burnett sur, sd at 2500 ft.

CHAMBERS COUNTY—S. J. Hindman's Bullock-Collier 1, Collier 200-acre lease, Griffith league, 2891 ft to W and 60 ft to S line, dr 3310 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Moore 4, John M. Moore lease, dr 640 ft. Marland Oil Co. of Texas' Lockwood 2, dr 200 ft. Pathfinder Oil Co.'s Pinkney 1, T. F. Pinkney sur, 400 ft NE of N cor of sec 111, 300 ft NE of E cor 101, 1 mile E Davis & Co. 2, dr 2000 ft. Jas. W. Rich et al's Moore-Hager 2, 300 ft NE No. 1, SE side of dome, dk. Rycade Oil Corp.'s Fritz Meier 1, 800 ft E of SW cor and 200 ft N of S line of Fritz Meier 207.7-acre tract, dr 1422 ft; Nash 2, Alsberry sur, 400 ft E and 600 ft S of NW cor Nash's 486-acre tract, 28 degrees NW and 4650 ft NW No. 1, dr 5022 ft.

GALVESTON COUNTY—Gulf Prod. Co.'s George E. Smith 2, at High Island, fsh at 3200 ft. The Texas Co.'s R. C. Coon 3, 6800 ft W and 1500 ft S of No. 2, lcn.

GRIMES COUNTY—J. E. Cuthrell's Ruth No. 4, NE of Carlos, dr 2310 ft; No. 3, sd at 3500 ft; No. 5, (shallow test) dr 380 ft. L. F. McCausland et al's G. W. Dodd 1, 3 miles W Iola, 150-acre tract of Dodd farm, Timothy Jones league, dr 2877 ft.

HARDIN COUNTY—Kirby Petroleum Co.'s Kirby-Capitol 2, Hodges 202-acre lease, 150 ft N and 20 ft E No. 1, fsh at 3057 ft.

HARRIS COUNTY — Dome Dev. & Pet. Co.'s Schneider 1, Schneider farm John D. Taylor sur, blk 41, temp abn. The Texas Co.'s Warren 1, 3 mile S Hockley, 400 ft NE Staiti 17, 10 degrees to W of line drawn through Nos. 13, 15 and 17, dr 3478 ft; Warren 3, 750 ft NW No. 2, dr 1149 ft.

JACKSON COUNTY — Houston Oil Co.'s Rose & Sample 1, 7 miles W Edna, Rose &

Sample tract, rigging up; Rose & Sample 2, 1650 ft N and 50 ft W of NE cor of George Hecht 200-acre tract, Pedro Gallardo sur, dk. Vanderbilt Pet. Co.'s Seliner 1, 4 miles N Vanderbilt, C. W. Hall subdivision of Harwood-Burns ranch, at 2720 ft. Jackson County Oil Synd.'s Drushell 3, 7 miles NW of Edna, on Horseshoe Lake, reported dr below 2000 ft.

JEFFERSON COUNTY—Houston Oil Co.'s Sun Davis 1, Seth Davis tract, junked at 1576 ft; Pipkin 10, 934 ft S of Pipkin 5, Pipkin sur, dr 2537 ft. Paggi Bros.' Wilson Hardware Co. 1, ¾ mile SW Miller 1, reported dr below 810 ft.

LIBERTY COUNTY—Sinclair Oil & Gas Co.'s Condit Fee 1, David Minchey league, 800 ft W of line drawn due S from Gulf Prod. Co.'s M. Van Deventer 1, dr 2520 ft.

MATAGORDA COUNTY — Marland Oil Co.'s Murphy 1, Jeremiah Dwyer sur, dr 5025 ft. Rycade Oil Corp.'s Gray 2, 60 ft N of S line and 1400 ft W of E line of blk 2, dr 3400 ft. Sheppard Mound Oil Co.'s Hawkins 2, offset to Maryland's Murphy 1, 3000 ft E of Commonwealth Oil Co.'s Hawkins 1, 1000 ft SE No. 3, sd at 1400 ft, repair rig.

SAN JACINTO COUNTY—C. O. Fleming et al's No. 1, northern part of county, dr below 562 ft.

WALKER COUNTY — Blue Ridge Oil & Gas Co.'s No. 1, at Weisers Bluff, 14 miles N Huntsville, 12 miles W Riverside, Eastham sur, dr; No. 2, dr.

WHARTON COUNTY — Gulf Prod. Co.'s Hackstedt 1, A. F. Austin sur, 769 ft to W and 1035 ft to S line, abn in gyp at 2200 ft; Felder 3, 20 ft to W and 1735 ft to N line, blk 3, S. Ingram sur, dr 4000 ft. The Texas Co.'s Taylor 1, at Boling, Taylor land, dr 508 ft.

San Antonio District Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Jim Hogg County—		
Buchanan-Plateau Oil Co.'s No. 4,.	125	....

DRILLING REPORT

ATASCOSA COUNTY — DeLange-Eiser Co.'s Tom 2, dr below 4600 ft.

BEXAR COUNTY—Aviators' Swearingen 1, dk. J. M. Davis et al Koch 1, no report. White & Hampton's Swearington 1, sd.

BASTROP COUNTY — Foster, Reiter & Clark's Mills Hicks 1, dr.

DUVAL COUNTY — Co-Operative Drilling Co.'s Dinn 1, sd 2070 ft. Mesquite Oil Co.'s No. 1, setting liner. Hill-Pierce Corp.'s Martinez 1, dr. O. W. Killam's Benavides 1, set 6⅝-inch casing at 1704 ft; Benavides 2, 20 million cu. ft gasser at 1681 ft.

GUADALUPE COUNTY — J. K. Hughes Dev. Co.'s Allen 20, no report. Allen Burman's Bailey 1, lcn. Magnolia Oil Co.'s Nos. 13, and 14, dr. Jennings et al's Vogel 1, rebuilding dk. Ross & Green's Pryor 1, sd. Stebbins Oil & Gasoline Co.'s Lenz 1, dk. W. B. Pittman et al Hy Thomas 1, sd 1950 ft. Flick et al's Weinert 1, no report. McClannahan's Herman Lenz 1, dr. J. M. Davis et al's Koch 1, coring. C. N. White et al's Gib Springs 1, sd 2270 ft.

JIM HOGG COUNTY—Buchanan-Plateau Oil Co.'s Nos. 3, set casing; 4, producing 125 bbls. Rycade-Rydal Oil Co.'s W. P. Allen 1, sur 21, dr. Simms Oil Co.'s Wood 1, sur 84, dr. J. W. Pippin et al's No. 1, sur 291, dr below 1000 ft. Plateau Oil Co.'s Martinez 4, set 6⅝-inch cas 2026 ft. Buchanan et al's No. 4, dr below 1800 ft. Russell-Hoffman's David Vela ranch 1, dk; Givens 1, rigging up. Big Bend Oil Co.'s Martinez 5, cemented 6⅝-inch cas at 1900 ft; Martinez 6, dr below 1050 ft. Mirando Oil Co.'s No. 11, set cas at 2048 ft. San-Tex Oil Co.'s No. 1, sur 262, dr below 1200 ft. Magnolia Pet. Co.'s Thompson 4, sd 2205 ft; Oscar Thompson 6, set cas at 1900 ft. Texo Oil Co.'s Nos. 3, dr below 2570 ft; 4, dr below 1978 ft. Weber Oil Co.'s Holbein 4, sd 3375 ft. Kitselman & St. Albans Interests' Holbein 9, set 6⅝-inch cas at 2012 ft. Plateau-Wheat's Nos. 3, dk; 4 and 5, lcns. Johnson-Detray's Vela 1, coring at 2189 ft. Plateau-Texas-Pacific's Freeman 2, no report;

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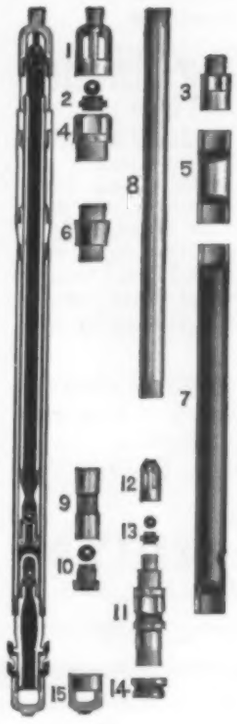

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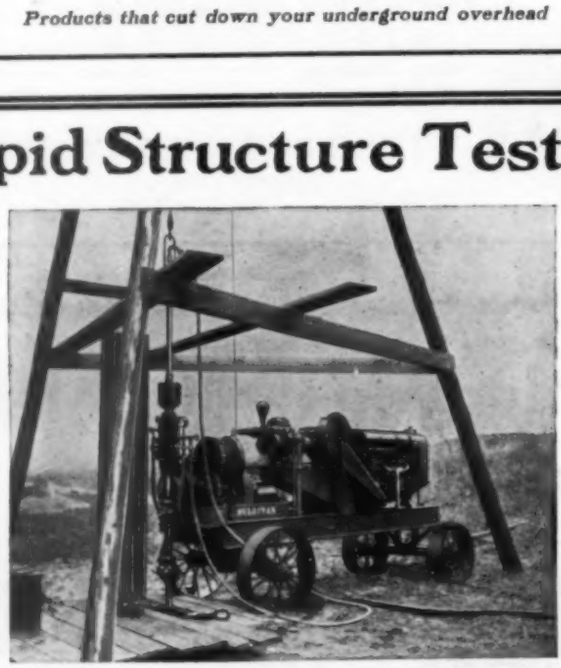

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New Bulletin No. 4280-A

Sullivan Machinery Co.

122 South Michigan Ave., Chicago

DALLAS TULSA GARBER

Freeman 5, dr; Freeman 6, cemented cas at 2002 ft. O. W. Killam's Martinez 3, set cas at 1705 ft. Elliott-Texas-Pacific's No. 2, dr below 2280 ft. Henne-Winch-Farris No. 1, dr below 1400 ft.

LIVE OAK COUNTY—Grubstake Investment Assn.'s Nichols 3, no report. Glasscock & Fallin's Charles R. Tips 1, dr below 500 ft. Southern Natural Gas Co.'s Nos. 9, dr; 10, lcn. Coquet et al's Hicks 1, dr.

ZAPATA COUNTY — H. J. McMullen's Serapio Vela 1, 2 and 3, lcns. R. K. Bateman et al's No. 1, sur 617, dr.

Arkansas Wildcats

BRADLEY COUNTY—Rhodes et al's McQuistian 1, 36-12-8, sd 225 ft.

CLARK COUNTY—Southern Drilling Co.'s Burrows 1, 35-10-20, sd 714 ft.

COLUMBIA COUNTY—Arkansas Fuel Oil Co.'s Hardy 2, 1-19-22, coring 685 ft. Hargis et al's Souter 1, 24-17-22, sd 35 ft. Heath Trust's Williams 1, 1-19-21, testing 2650 ft. Johnson et al's Sailles 1, 18-17-22, sd 915 ft. Kemp et al's Emerson 1, 7-19-19, sd 2260 ft. Ky-Ark Pet. Co.'s Doss 1, 29-19-20, sd 650 ft. Meier et al's Gantt 1, 15-17-22, dk. Phillips et al's Davis 1, 14-18-21, sd 2730 ft. Transcontinental Oil Co.'s McClurkin 1, 6-16-19, dr 650 ft. Wingfield & Mitchell's Bodcau Lumber Co. 1, 4-20-21, dr 1850 ft.

DALLAS COUNTY — Durr et al's Riggs-Matlock 1, 33-8-15, sd 2400 ft.

DREW COUNTY—Graves et al's Karnes 1, 20-14-6, sd 2472 ft. Rhodes et al's Harris 2, 5-13-8, sd 3015 ft. Spooner et al's Meyer 1, 4-16-17, sd 50 ft.

GRANT COUNTY—Haley & Evans' Pike 1, 8-6-11, sd 50 ft.

HEMPSTEAD COUNTY—Grassy Lake Oil Assn.'s Gun Club 1, 27-12-27, sd 2100 ft. Hempstead Oil Co.'s Nicholls 1, 17-11-25, sd 1980 ft. Wooten et al's Walker 1, 22-11-24, dr 1100 ft.

LA FAYETTE COUNTY—Humble O. & R. Co.'s Bodcau 1, 21-15-22, rig. Ken-Saw Pet. Co.'s Red River Valley 2, 3-20-24, fsh 2040 ft.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 15-13-29, 3900 ft. Grote et al's Allen 1, 2-13-29, to set 6-inch 3410 ft. Johnson et al's Hawkins 1, 10-11-31, sd 1350 ft.

MILLER COUNTY—Coplen et al's Johnson 1, 36-15-27, sd 400 ft. Gillespie et al's Fee 1, 2-15-26, sd 150 ft. Doc Nigh's Thomas 1, 12-20-28, coring 2945 ft.

NEVADA COUNTY — McInturff et al's Eades 1, 11-12-23, dr 50 ft. Zingg et al's Groves 1, 22-10-23, sd 1230 ft.

OUCHITA COUNTY — Willis Wright Synd.'s (El Dorado Union Oil Co.) Eagle Lumber 1, 17-12-15, set 8-inch 1459 ft. Langston et al's Allen 1, 25-14-19, dr 1500 ft. Lion O. & R. Co.'s (Schwartz-Cox) Burton 2, 30-15-17, r 2300 ft.

UNION COUNTY—Berry et al's Union S. M. 1, 14-19-11, sd 1770 ft. Bradley & Carzort's Pate 1, 16-17-17, dr 2375 ft. Coates et al's Springer 1, 36-17-16, set 8-inch 2542 ft. Jones et al's Murphy 1, 36-19-14, dr 2500 ft. Liberty Oil Co.'s Davis 1, 31-16-14, dr 2500 ft. Magnolia Pet. Co.'s Chandler 1, 4-19-14, dr 2125 ft. Mathews et al's Teele 1, 11-19-12, to set cas 2662 ft. Ward et al's Goodwin 1, 16-16-14, sw 2483 ft.

Louisiana Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Winn Parish—		
Galloway & Arrendale's McCarty 1, 5-12-1e	•	2315

DRILLING REPORT

BIENVILLE PARISH—Roxana Pet. Co.'s Bryan 1, 30-17-6, dr 3475 ft.

BOSSIER PARISH—Boger et al's Atkinson 2, 3-18-12, to set 6-inch 1108 ft; Finouef 1, 8-18-12, dk. Coker et al's Rhodes 1, 31-21-11, set 12¼-inch 130 ft. Osborne et al's McDade 2, 32-19-11, sw and oil 508 ft.

CADDO PARISH—Dixie Oil Co.'s Dillion 53, 13-21-15, set 6-inch 3575 ft; Jolly 1, 27-22-

15, set 10-inch 120 ft; Noel B-1, 24-21-15, dr 4½-inch plug 3450 ft. Flournoy et al's Simpson 1, 8-16-15, dr 1550 ft. Fortuna Oil Co.'s Mitchell 1, 17-18-16, bailing casing 1857 ft; Robertshaw 10, 23-21-15, set 4½-inch 3550 ft. Gulf Ref. Co.'s Ferry Lake 69, 14-20-15, dr 2625 ft. Haynes Bros.' Louisiana L. S. & P. Co. 1, 8-19-16, ru to deepen, 2330 ft. Stith et al's Pitts 1, 11-23-16, sd 600 ft. The Texas Co.'s Hutchinson 1, 15-15-12, gas blow-out, 920 ft. Jeems Bayou 1, 15-20-16, set 6-inch 3501 ft. Woodley et al's McVea 1, 23-19-14, sd 1192 ft.

CALDWELL PARISH—W. E. Neill's Cain Hill 1, 21-14-4e, sd 3320 ft.

CLAIBORNE PARISH—Black O. & G. Co.'s Aubrey 2, 20-21-8, testing 770 ft. Claiborne-Lincoln Synd.'s Fields 3, 22-19-5, r 2260 ft. Clark & Melat's Heard 1, 5-21-6, sd 2005 ft. Collins & Woodley's Oakes 1, 8-20-5, dr 2505 ft. Triangle Drilling Co.'s Cox 1, 7-19-5, dr 2065 ft.

DE SOTO PARISH—Daniels & Roscoe's Pollack 1, 36-11-14, dr 3225 ft. Fortuna Oil Co.'s Alexander 1, 32-12-15, rig. Ulrey et al's Deas 1, 23-11-12, lcn; Bishop-Robinson 1, 22-11-12, wosr 2992 ft, oil in hole.

GRANT PARISH—Finn Construction Co.'s Ball 3, 14-7-1w, lcn. Grant Parish Pet. Co.'s Ball 2, 1-7-1w, sd 150 ft; Ball 3, 14-7-1w, dr 935 ft.

JACKSON PARISH—Big Chief Oil Co.'s Rymes 1, 13-14-4w, dr 650 ft.

LA SALLE PARISH—Columbia O. & G. Co.'s Urania 1, 22-10-2e, sd 200 ft. Gould & Monroe Drilling Co.'s Harper 1, 23-10-1e, rig. Gulf Ref. Co.'s Urania 1, 22-10-2e, dk; Urania A-1, 22-10-2e, r 2657 ft. Imperial O. & G. Co.'s Urania 1, 10-10-2e, dk. Bill Rowe's Urania 1, 7-10-2e, rig. Urania Pet. Co.'s Urania Lumber 6, 18-10-2e, shut in 1511 ft. Zeigen et al's Hardtner 1, 19-10-2e, dk; Urania 1, 18-10-2e, dr 1425 ft.

LINCOLN PARISH—Buckner et al's Barrett 1, 13-20-3w, sd 1220 ft. Gulf Ref. Co.'s Dudley 1, 4-18-4w, rig. Ruston Drlg. Co.'s Richardson 1, 7-18-2w, lcn.

NATCHITOCHES PARISH—R. O. Roy & Co.'s Durr 1, 27-10-10, dr 1715 ft.

OUACHITA PARISH—Dickson & Frue's Goodwin 1, 24-18-2e, dr 2860 ft. White et al's Jones 1, 6-16-5e, sd 2175 ft.

SABINE PARISH—Emlet et al's Bowman-Hicks Lumber 4, 8-7-12, dr 1675 ft; Bowman-Hicks Lumber 5, 9-8-12, showing oil 2525 ft. Fla-La Oil Co.'s Walker 1, 8-5-12, dr 2400 ft.

UNION PARISH—Clark & Melat's (Jones & Walker) Feazel 1, 6-19-2e, sw 2560 ft; to deepen. Roxana Pet. Co.'s Henderson-Bennett 1, 13-22-3w, dr 865 ft.

WEBSTER PARISH—Fortuna Oil Co.'s Branton 1, 16-22-9, set 8-inch 800 ft. Kinnedy et al's Ambrose 1, 19-20-10, rig. McDowell et al's Hortman 1, 15-20-10, sd 2525 ft. Standard Oil Co.'s Maynor 1, 34-23-10, dr 2550 ft.

WINN PARISH—Hall et al's Nagle 1, 6-10-2w, sd 270 ft.

Oklahoma Wildcats

ALFALFA COUNTY—McGinnis & Ward's Watts 1, C NE SW 21-27-14w, sd 3504 ft. Armstrong, Henley & Piffles' Turnbull 1, C NW SE NW 25-24-11, sd 3000 ft.

ATOKA COUNTY — McPhearson et al's Wild 1, SWc NW 7-2-9, sd 4323 ft. Henson et al's Dabney 1, C SE NW 17-4-11, sd 3005 ft. J. P. Torrance et al's Fee 1, SWc NE 1-2-9, sd 2685 ft. Wapanuka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, sd 1343 ft.

BLAINE COUNTY—Meyers et al's Chronister 1, SEc NW NW 7-18-15w, sd 965 ft. Okomo Oil Co.'s Ekleman 1, SEc 21-13-10w, sd 2610 ft.

BRYAN COUNTY — Alexander's Hampton 1, SEc NE 26-7-11, sd 1400 ft.

CANADIAN COUNTY — Thos. Revelle's Dawson 1, SEc 34-13-9w, repair rig 2955 ft. Carroll et al's Setter 1, SEc 2-13-8w, sd 100 ft. Wilcox et al's Sanders 1, C NE NE NE 29-11-7w, sd 40 ft.

CLEVELAND COUNTY — Garr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft.

GRANT COUNTY—Embry et al's Edwards

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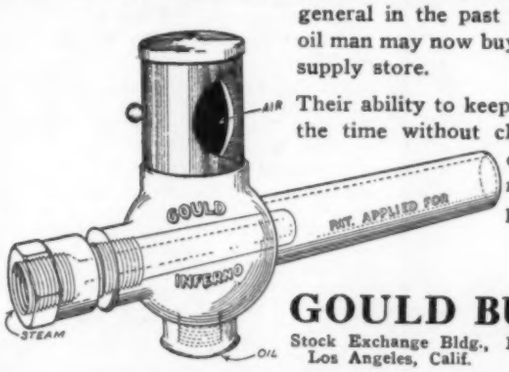

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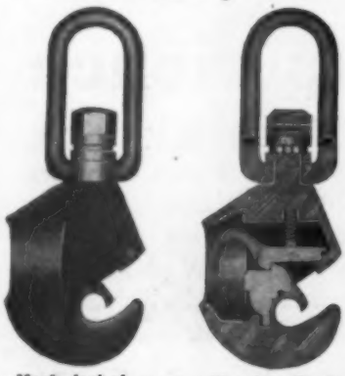

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1, C SE SE NW 20-26-4, sd 1000 ft. Midwest & Gulf's Moon 1, NEc NW 8-27-8w, sd 2490 ft. Frank Traver et al's Fuss 1, SWc NW NW 3-27-4w, sd 1250 ft.

HUGHES COUNTY — Mather & Skelly's McClain 1, C SW SW 4-5-11, sd 3206 ft. Walton, Snyder & Marshall's Kiles 1, C E L NE NW 8-6-10, fsh 3513 ft.

JEFFERSON COUNTY—Barker et al's Major 1, C SE SW 34-5-6w, spd and sd. Godley Oil Co.'s Woodworth 1, C NE NW 36-5-4w, sd 1100 ft. W. E. Norton's Unknown 1, SEc SE 7-5-9w, tools moved out. Pauline O. & R. Co.'s Garver 1, C NE SW 17-5-8w, lcn.

KAY COUNTY—Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, dr 4795 ft. Hickman & Barnhart's Sheets 1, C NW SW SE 25-29-2w, sd 835 ft.

KIOWA COUNTY—Connor et al's No. 2, NEc NW NW 34-7-16w, sd 1100 ft. Alcorn Oil Co.'s No. 1, NEc SE SE SW 13-7-16w, co 1900 ft.

LINCOLN COUNTY—P. & R. Corp.'s Hanzig 1, SWc NW NW 14-13-6, sd 2886 ft. Douglas Oil Co.'s Ewing 1, NEc 7-13-3, sd 2965 ft. J. C. Cook's Richardson 1, SWc NW SW 8-12-5, dr 4150 ft. Eugene Coste & Co.'s Ross-Fortune 1, SEc NW 26-12-2, dr 3700 ft. Wilcox O. & G. Co.'s Smith 1, SEc NW NE 12-12-3, r 3640 ft. F. O. Howarth's Harris 1, SEc NE 22-15-2, cementing 3930 ft. Santrock Drilling Co.'s No. 1, SEc NW 17-15-3, sd 920 ft. Ruby et al's Cull 1, NEc NW 36-15-4, co 3530 ft.

LOGAN COUNTY—Skelly Oil Co.'s Newman 1, NWc NW 32-19-3w, sd 2500 ft. Franklin Oil Assn.'s Moore 1, NWc SE SE 35-17-4w, dr 2310 ft. McMunn & Nixon's Field 1, SWc NE SE 35-7-4w, rig. Haley & Pioneer Pet. Co.'s Quair 1, SWc SE 33-18-3w, spd and sd. Blackford O. & G. Co.'s Lair 1, C S L N½ SE 28-16-1w, fsh 750 ft. Magnolia Pet. Co.'s Pritchard 1, NWc 23-15-1e, sd 3165 ft.

LOVE COUNTY — Driller Syndicate Oil Co.'s Wilson 1, NWc SE 11-7-2, sd 2830 ft. Simms Oil Co.'s Starritt 1, SEc NE SE NE 29-6-3, dr 3400 ft. Magnolia Pet. Co.'s Crowe 1, C NE NE SE 13-8-2, dr 1240 ft. Smyer & Stein's Gray 1, C SE SE 12-9-1, rig.

MAJOR COUNTY—Texas Prod. Oil Co.'s Basin 1, SWc 6-22-14w, sd 1300 ft. Bradstreet Oil Co.'s Ratcliffe 1, C SW 9-22-9w, dr 4115 ft. Frantz & Slick's Gray 1, C NW 36-21-11w, sd 1000 ft.

PONTOTOC COUNTY—Highland Oil Co.'s Hatcher 1, C NW SW 4-4-5, sd 2260 ft. Galloway et al's Hays 1, NEc SE NW SW 13-3-6, sd 1160 ft. Craig et al's Starritt 1, NWc NE 5-4-5, sd 600 ft. American O. & R. Co.'s McDaniels 1, SEc NE SW 3-4-6, fsh 3140 ft, pb. Lloyd & Smith's Lloyd 2, C NE SW NE 6-3-7, run 6-inch 990 ft.

POTTAWATOMIE COUNTY — Ossie Oil Co.'s Howell 1, SWc NE 17-10-2, sd 3370 ft. Davis Detrick's McGathey 1, SEc 10-6-2, sd 3850 ft. H. C. Guinnup et al's Floyd 1, SWc SE 12-11-3, sd 3670 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, repair rig 460 ft. Maud Oil Prod. Co.'s Yinson 1, NEc SW 18-7-4, sd 2935 ft. McMann Oil Co.'s Neghan 1, SWc NW 19-7-4, sd 100 ft. Halmond Osmond et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft. Central Nation Oil Co.'s Toney 1, C SW SW SW 28-10-2, rig.

ROGERS MILLS COUNTY — Twin Hills Oil Co.'s McClure 1, NWc 15-16-26w, sd 4310 ft. Trio Oil Co.'s No. 1, SEc NW SW 3-13-26w, dr 3160 ft.

SEMINOLE COUNTY — Maxwell et al's Charty 1, C NE NW 3-6-6, sd 2450 ft. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, sd 2840 ft. Wm. McDougal Dindy 1, C SE SE 30-6-7, sd 3427 ft. R. F. Carland's Farlin 1, C NE NW 6-6-18w, fsh 1390 ft. Central National Oil Co.'s Harjo 1, C NE SW NE 14-11-7, r 2340 ft. Transcontinental Oil Co.'s Davis 1, NE SE 22-7-7, fsh 3325 ft. Bryan Bros.' Walker 1, C SE SE SE 4-7-6, dr 240 ft.

WOODS COUNTY—Victor Oil Co.'s Van Buskirk 1, SWc SE 10-25-15w, sd 960 ft.

WASHITA COUNTY—Meridan Pet. Co.'s No. 1, SE SE SE 14-9-14w, lcn.

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And yet the proper choice of this little item is one of the most important matters connected with pumping wells.

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On the ball and seat depends, to a large extent, the number of times you have to pull your wells. (A good ball and seat outlasts from 3 to 15 poor ones.)

Production also is dependent, to a large degree, on balls and seats. A product that is corroded quickly, pits easily and fails to seat properly, gives but a small percentage of its possible yield.

All over the world NO-CO-ROS are noted for their uncompromising quality. Balls and seats composed of special-formula, non-corrosive steel, triple tested and absolutely guaranteed, cost a trifle more, perhaps—but they give three to 15 times more service. That is the only kind Norris Brothers will ever produce.

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Made with insert jaw in the handle which saves the wrench.

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With steel frames which will not break—the element of safety.

With extra long steel handle giving extra leverage and saves effort.

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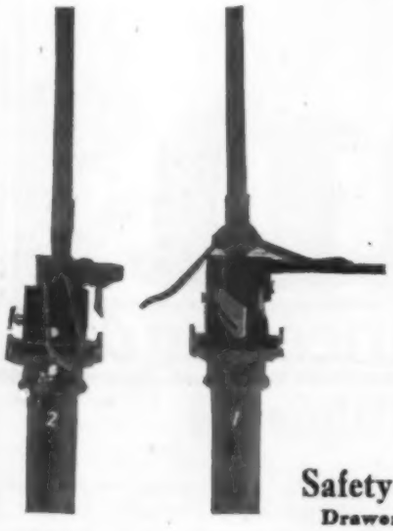

Stop Lifting Your Tubing to Make Your Kick-off!

Note Drawing No. 1 with elevator on top. The operator applies the brake. Push handle to right.

Note position of tool in Drawing No. 2. String of tubing hanging on pulling machine. Take Elevator off.

Write for complete details

Manufactured by

Safety Pulling Machine Company
Drawer A **Independence, Kansas**

Kansas Wildcats

BARBER COUNTY—R. D. Brown's No. 1, NWc SW NE 33-30-14w, co 3250 ft.

BARTON COUNTY — Cheyenne Oil Co.'s No. 1, Sooy, SWc SW 27-18-12w, sd 3525 ft. Haynes et al's Taul 1, NWc 21-12-12w, sd 2100 ft. John Herron's No. 1, SEc NE 22-18-13w, dr 3840 ft. Huffine et al's Smith 1, C NE SW 21-19-12w, run 12-inch 1365 ft.

CLARK COUNTY — Watchorn Oil & Gas Co.'s Morrison 1, SEc NE NE 2-22-1w, dr 5190 ft.

CLOUD COUNTY—Livingston et al's Murdock 1, SEc 6-6-4w, dr.

COFFEY COUNTY—Mendenhall & Wrinkler's Elliott 7, C NE SW 14-23-13, dr 870 ft. Manhattan Oil Co.'s Elliott 2, C S L SW 14-23-13, spd.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-20, fsh 2890 ft.

GEARY COUNTY—Liberty-Texas Oil Co.'s Wright 1, NEc 9-12-6, sd 750 ft; Foster 1, NEc SW 3-12-6, sd 2000 ft.

GOVE COUNTY—Keyes Bros. & Marine's Bowman 1, NWc SW 23-13-26, lcn.

GRAHAM COUNTY—Keyes Bros. & Marine's Taxton 1, SEc NW 23-8-24w, co 2000 ft. Gruen & Shriler's Baker 1, NWc SE NW 17-10-24w, rig.

JEFFERSON COUNTY — Northern Counties' Edwards 1, SEc NW NW 13-8-9, sd 3405 ft.

KINGMAN COUNTY—Hale et al's Graber 1, SWc NW 34-27-7w, fsh 3025 ft.

LABETTE COUNTY—Ark Fuel Oil Co.'s Sparks 1, NEc SE SE 14-31-17, sd 1100 ft.

LINCOLN COUNTY — Equity Oil Co.'s Jellison 1, NWc SE 19-13-9w, repair rig 2860 ft. Scott & Collins' Stone 1, SEc SW NE 19-11-6w, sd 500 ft.

MARION COUNTY—H. S. Garden et al's Waner 1, SWc 9-21-4, dr 2035 ft. Leonard Pet. Co.'s Whaler 1, SEc NE NW 23-19-4, lcn.

NEMAHA COUNTY — Nemaha O. & G. Co.'s Meyers 1, NWc 19-3-11, sd 3250 ft.

OSAGE COUNTY—Rodgers & Bittle's Bertha 1, SEc NW 22-17-16, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Baker et al's No. 1, C SE SE 3-10-4, sd 260 ft.

POTTAWATOMIE COUNTY—Crawford et al's Stewart 1, C W L SE SE SE 17-19-12, rig; Greishabert 1, SWc SE SE W 9-17-17, rig; St. Mary 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—Stamey's Barnes 1, SEc NE 21-20-6w, dr 3140 ft. Jasper & Beschka's Walker 1, SWc NE 10-19-6w, sd 2200 ft.

RILEY COUNTY—Pawnee O. & G. Co.'s Marks 1, SEc NE NW 26-10-6, sd 2030 ft.

ROOKS COUNTY—Keyes Pet. Co.'s Sandon 1, NWc SW SE 7-8-20w, spd and sd. J. C. Findiess et al's Minx 1, SWc 25-10-19w, r 785 ft.

RUSSELL COUNTY — Valerius O. & G. Co.'s Sutton 2, NEc SW SW 5-12-15w, dr 300 ft. Pomeroy et al's Cooper 1, SEc 33-12-11w, dr 3290 ft. Streeter & Stearns' Oswald 4, SEc NW SW 8-12-15w, rig. Skelly Oil Co.'s Oswald 2, SEc NE NE 18-12-15w, lcn. Valerius O. & G. Co.'s Oswald-Valerius 5, SEc 7-12-15w, dr 800 ft. Streeter & Stearn's Ed Oswald 3, SWc 8-12-15w, dr 700 ft. Midwest Refg. Co.'s Booth 1, SEc NE NW 35-15-15w, rig.

SALINE COUNTY—Thrall et al's No. 1, SEc NE NW 15-15-4w, sd 1010 ft.

SEDGWICK COUNTY — J. H. Liggett's Funk 1, NEc NW 11-26-1, dr 1400 ft. Harwood-Winters & McKenne's Casas 1, SEc NW NE 7-22-4w, lcn. L. E. Craig et al's Mean 1, NWc NW 26-28-1w, dr 1700 ft. Curtis et al's Duncan 1, SEc NW NW 19-29-1w, lcn. Allison & Fitzwilliams Webb 1, C NE 21-29-3w, spd and sd.

SEWARD COUNTY — C. T. Dev. Co.'s Woods 1, NWc NE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Selsey 1, NEc NW 2-33-33, dr 2650 ft.

SUMNER COUNTY—Texas Co.'s Nixon 1,

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PATENTS
Patents Obtained and Trade Marks and Copyrights registered
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HARDWAY & CATHEY
Phone Preston 4790 Houston, Texas

SWc SE SE 12-35-1, lcn. Foster et al's French 1, NWc 13-31-2, lcn. Phillips Pet. Co.'s Armspiger 1, NWc 17-34-1, fsh 710 ft. Wilcox O. & G. Co.'s Stayton 1, NWc SW 5-32-2w, dr 500 ft. Champlin Ref. Co.'s Stevenson 1, SEc SW SE 9-30-1w, spd.

TREGO COUNTY—Keyes Pet. Co.'s Davis 1, NEc SW 16-11-24w, fsh 3030 ft; Walsh 1, NWc SE 5-11-25w, sd 1450 ft; Walsh 2, SWc NE SW 5-11-25w, sd 1550 ft.

WABAUNSEE COUNTY—Williams et al's No. 1, NEc SW 9-5-5, sd 3600 ft.

WILSON COUNTY — Rhodes & French's Brown 1, NWc SW NW 2-27-14, dr 980 ft.

WOODSON COUNTY—Mathews et al's Jeffers 1, NWc SE 36-26-15, lcn. Dave Alter et al's Hunt 1, NWc SW 13-25-14, rig. Harris et al's Greese 1, NWc SE 35-25-13, lcn. Superior Oil Co.'s Mason 1, SEc NE 14-25-13, sd 1395 ft.

PATENTS OBTAINED FOR INVENTORS
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U.S. PATENT ATTORNEY
305 INTERURBAN BLDG., DALLAS

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ATTORNEYS
Gulf Building, Houston, Texas
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Formerly Assistant Examiner United States Patent Office
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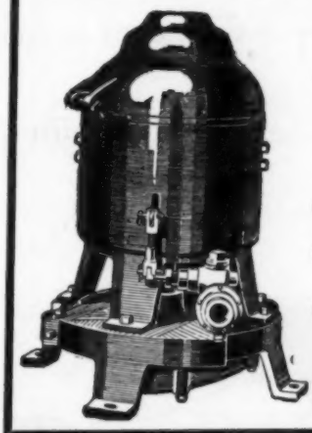

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You Are Not Drilling Wells as

Unless You Are Using

During coming months, drilling will be hard and fast — many "wildcat" wells will go down.

It will be a time when a good belt will show its value as never before.

Holes will be deeper than ever and the loads heavier.

The driller who tries to get by with cheap belting will find it expensive before he is through with his experience.

SENSATION Belt drills more footage for its cost, and pumps more barrels of oil.

It is made of a special weave duck, which practically eliminates

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TRADE MARK

Sensation Belt

Say you saw it in The Oil Weekly

Economically as Possible—

SENSATION Drilling Belts

stretch (not enough to allow the belt to climb the clutch shoes before it is detected) and is put together with a special friction, so elastic and firm in its hold that ply separation is almost unknown.

SENSATION Belt is stronger, more flexible, stands the weather better and, of course, outlasts ordinary belts.

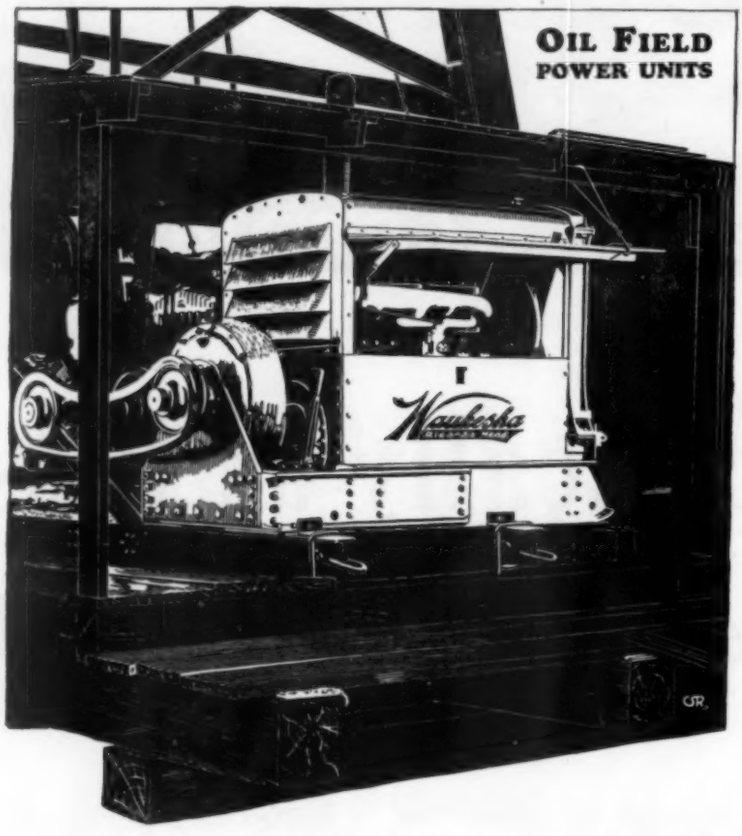
For low service cost, SENSATION Belt is unequalled. Try it at once and you will be convinced. It is sold in the Mid-Continent Oil Fields and by the Bridgeport Branches.

THE BRIDGEPORT MACHINE COMPANY

General Offices & Works WICHITA, KANSAS

Say you saw it in The Oil Weekly

100 *H. P. Unit "Wildcatting" Near Hardin, Texas*



Cutting Power Costs in Half

"Wildcatting" out of Hardin, Texas, H. S. McGary is using a pair of Waukesha "Ricardo Head" Power Units; one is driving the rotary rig, another the mud hogs. These units, which cost less, are easily installed, and even run on "waste gas," are but two of hundreds which have been cutting power costs in the oil fields during the past seven years. When the drilling is finished, these units are immediately available for all other power requirements around the oil well; or are easily portable to new operations. They open new fields for "wildcatting."

Write for "Oil Field Bulletin" giving full information

WAUKESHA MOTOR COMPANY

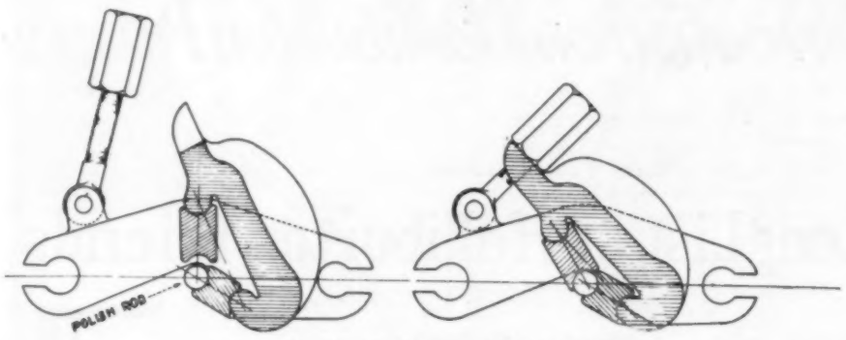
Waukesha, Wisconsin

Houston Tulsa Los Angeles Kansas City New York City

Exclusive Builders of Heavy Duty Gasoline Engines for Nearly Twenty Years

Say you saw it in The Oil Weekly

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS



D. and B. Simplex Hanger and Polish Rod Grip

D. & B. Pump Company Has Hanger and Rod Grip

A new beam hanger and polish rod grip to be known as the D. & B. Simplex has been perfected and placed on the market by the D. & B. Pump and Supply Company, 301 West Avenue 26, Los Angeles, Calif., and is meeting with a splendid reception, due to its strength, gripping power and flexibility.

The beam hanger is adaptable to a standard beam without alterations. The sheave allows the cable to automatically equalize and the bail serves as a hook-on means when vertical and can also be dropped back over a pin in the beam if desired.

The Simplex Grip offers a very powerful gripping action on the polish rod due to the use of the toggle action of leverage in forcing the jaws together. The advantage is that major strains do not come on the clamping screw and nut but are taken by the heavy steel parts especially adapted for that purpose.

The cut shows a horizontal cross section of the grip in both the open and closed positions. When the grip is open the polish rod is readily removed or placed in clamping position.

Further information can be secured by writing the company.

Heavy Portable Drilling Outfit is Money Saver

To enable operators to utilize present rotary drilling rigs of all sizes and eliminate steam boilers, engines, and pumps, the Portable Rig Company, West Building, Houston, Texas, is putting in an addition to its line of portable drilling outfits.

This outfit is a heavy two-unit portable type. It substitutes a gasoline driven power unit for the steam boiler and engine to operate the draw works together with a separate gasoline engine in connection with power driven duplex mud pumps.

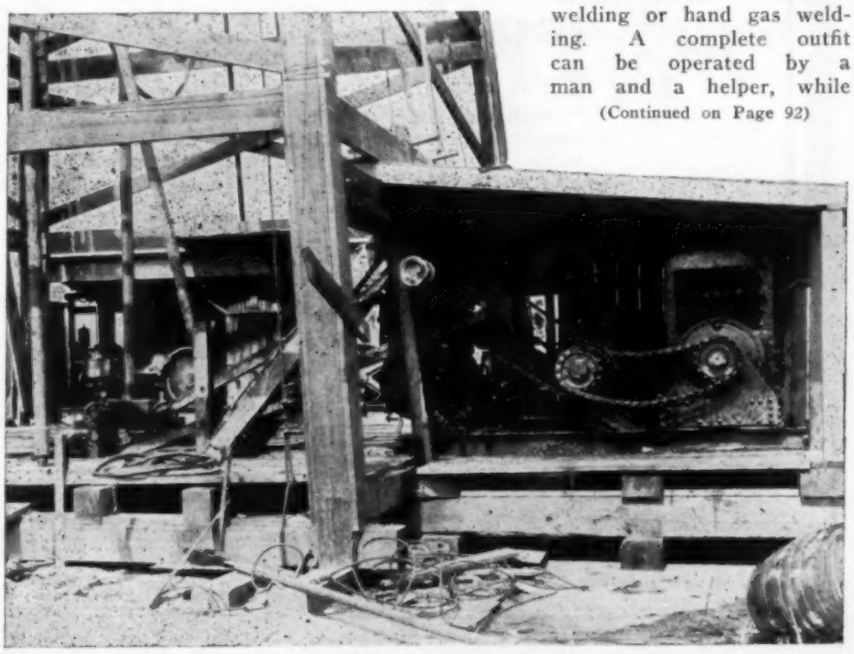
Both the power unit for operating the draw works and the pump unit can be equipped with any size engine from 30 horse power to 100 horse power, depending upon the type and size of rig to be operated.

Several of these rigs are now in operation throughout the Texas Gulf Coast territory, operating Union Tool No. 2 draw works, equipped with mud hog pumps. A few of the outfits are rigged up with Union Tool No. 5 and Oil Well Supply heaviest type draw works, using all standard equipment.

A well was recently completed in the Gulf Coast territory with one of these outfits, at a depth of 3500 feet, carrying a 9⅞-inch hole. The rig was operated 24 hours a day and the well was completed in a minimum of time, with considerable saving, especially in fuel.

The Portable Rotary Rig Company has been engaged in the manufacture of portable drilling outfits for more than a year and has had considerable success.

Additional data can be obtained from communicating with the company.



New Addition to Portable Rig Line

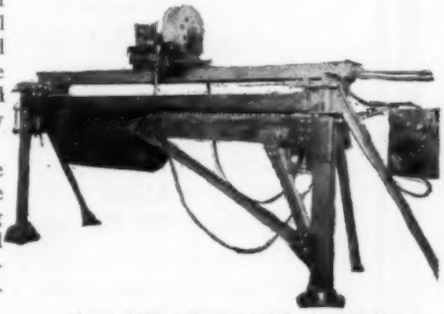
Automatic Arc Welder For Quick Welding Service

Following several years development and trial, the General Electric Company is now marketing a line of automatic arc welding equipments. These equipments, sold either as complete units or as separate parts, have been especially designed for quick, efficient and economical welding where quantity production is a factor. Heretofore, it has been the custom to supply the separate parts only.

The new outfit is expected to find its principal application in the construction of such standard products as tanks, boilers, etc.

Outstanding among the advantages claimed for these automatic equipments is the resulting increase in speed of production following their installation. Estimates by General Electric engineers, based on actual production, show that this increase in speed is especially marked when comparison is made between the automatic arc welder and either hand arc welding or hand gas welding. A complete outfit can be operated by a man and a helper, while

(Continued on Page 92)



General Electric Automatic Arc Welder

For Accurate Information on Halliburton Process

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"—Halliburton has contributed materially to the science of handling large, unruly wells by making ingenious use of the characteristics of virgin sand in resisting fluid from an external source."—U. S. BUREAU OF MINES.

HALLIBURTON OIL WELL CEMENTING CO., Duncan, Okla.

Equipment Available for all Fields

HALLIBURTON

Scientific Oil Well Cementing

LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

well cleo hunny I gess yu will be glad 2 no that I hav arove back home in huston rite side up with care & am now agin close enuff 2 yu that I cood run down 2 sea yu if I was 2 find time for a chanse.

well hunny like I ritten 2 yu last week when I was in old chicargo I did not no where I was goin from there & neether did I care mutch whitch is prooved in a large mesure by where I went—to iowa. yu see hunny it was like this. I have herd so mutch about iowa where the tall corn grows that I thort it wood be a good plase 2 go after bein in chicago where it is so mutch alleged skotch & simperthetick gin, but when I gotten out there I found out that all iowa makes out of corn is hogs. or if they do I did not see no evidents but mabe because I did not no nobody out there & they dont git a quainted verry fast out there for sum reesen or other & did not nobody make me no propersishuns.

anuther reesen why I went up 2 dee mones it that they had up a propersishun on a gasleen tax & I thort mabe I wood be needed for mi expert advise on that subject beins that I hav not worked at that trade for sum times. it seems like they left a word out of the law or sumthin but that did not seem 2 bother them none whitch was pretty resonable on account they left out the werd used whitch ment that the tax goes on the gasleen whether it is used or not. leevin out that werd reely makes it the onliest honest tax law in the cuntry, on account all other states says the tax is on gasleen that is used whilst they colleck on what is vaporated & spilled 2. well I did not git no job on that because they went rite ahed & herried the thing threw so that the tax cum on. when she starts everybody what has enny gasleen has 2 make a alferd david about how mutch they hav on hand in their tanks whitch meens that the fillin stashun peepul will tell a powerful lot of lies, whitch is 2 be expected when they go 2 sayin how mutch it is in there underground tanks sum midnite.

they hav got a good reesen for a gasleen tax in iowa. they is braggin that more farmers owns cars in that state than ennywhere & they hav 2 have more munny for rodes & alreddy the farmer is paying all the tax he can stand. so they just taxes gasleen 2 cents a gallen so that the farmers whitch has cars will pay about 10$ or 15$ moar taxes a year but will be kiddin thereselfs that the oil cos is bein made 2 dig up. of course they figgers on gittin sum out of turists whitch is passin threw, but them fellers aint goin 2 use no more than the amount that the fellers around the edge will go acrost the line 2 buy. but it is a grate skeem the legislashures have for lowerin the high cost of livin.

well hunny I will not berden yu with the detales on mi trip home from there on account it was not nuthin but a trane ride mostly acrost kansas whitch aint sutch a mutch 2 rite about enny moar than it is 2 rite about the feelds along the rode in Texas. it was not nobody on the trane for me 2 git intrested in, whitch I wood not a done nohow hunny on account I am trew 2 yu. it was 1 which I thort mite be a littel lonesome & I wood a talked 2 her sum just for a kindness 2 her but everytime I sed ennything 2 her she kinder looked susprised & went on talkin 2 a slick-hared college willie whitch was sittin acrost the car. so I jest desided that she cood git just as lonesum & she wanted 2.

it is a good thing that I gotten back when I did on account things is not goin so good with the boys down here on account they cut the price of crude whilst I was gone. I do not no if it wood a made enny difrents if I was here or not, but it is notisable that just as soon as it was norated about that I was gone from town well they cut the price without askin mi advict about the proberable future of the oil bizness in these parts. I gess it is all on account of south liberty whitch is a feeld that I did not tip nobody off 2 on account of I noed what it wood do when it got started. I noed that feeld was there ten yeres ago but I lade low on it so that it wood not brake the market. but they went ahed & brung her in ennyway & then cut the price while I was out of town.

it is the same way up in arkansaw although I am not werried mutch about that on account the big wells whitch they are gettin up there is just pilin up royalties for me & mi old man. if he can hold on 2 the munny he is gittin & if he will outlive mi new step maw we will be pretty well off some of these days. I meen me & yu will hunny, but unlessen she gits out of the way I will hav a hard time gittin enny of mi munny when the time comes.

well hunny now that I am back agin gess I can studdy sum moar on mi battery bizness whitch I ritten 2 yu about sum times ago. I did not do no good sellin the ideer in chicago because I desided that I had better git me a patent before I git 2 talkin around 2 big & hav sumbody cop mi ideer off of me whitch has bin did before whitch is 1 of the reesens why I am still pore. I have also got anuther ideer about makin sumthin out of salt water since the dew points is sendin a boat out in the oshun 2 make bromides 2 quite the nerves of flivvers. they are sending ships out in the middle of the oshun 2 git salty water 2 make this stuff out of & I do not beleev they are verry brite or they wood just go 2 a oil feeld like arkansaw for instants & they can git all of the salt water they want with out buyin no ship or nuthin like that.

but ennyway that gives me the first chanct for the utilizashun of mi new eleckrical invenshun because they use eleckricity in the manufacture of the bromides from salt water & I can git cheep power from the peebles patent underground natral batries 2 run the masheens whitch I will patent to make the bromide from the salt water whitch I can git around the feeld for nuthin.

well I will work on the skeem & will let yu no how I cum along with it. only I am not goin 2 call the stuff whitch I make ethel, but will call it cleo after yu hunny. yu is pretty suthin 2 me hunny whitch ort 2 make ennything named after yu werk the same way on a flivver. yore lovin paul.

"CUT OIL"

is a problem in CHEMISTRY

An "emulsion" represents a condition of a liquid which can be fully, scientifically and economically corrected by use of the chemical process. Use TRET-O-LITE process when you have cut oil and tank bottoms that require treating.

Wm. S. Barnickel & Co.
ST. LOUIS, MO.

Tret-O-litE
Reg. U. S. Pat. Off.

Automatic Arc Welder for Quick Welding Service

(Continued from page 89)

the completion of an equal amount of hand work in the same time would necessitate the use of four or more men. Estimates also indicate a low overhead expense. The use of push-button control provides simplicity and ease in operation. Uniformity of finished product and space saving by the reduction of the number of workers and quantity of stock on hand are among the other advantages claimed for this equipment.

A complete outfit consists of an automatic welding head and control panel, travel carriage and clamping device. Where it is desired, in order to meet special circumstances in any plant, the travel carriage and other component parts of the equipment may be assembled by the purchaser with his own device for holding the work.

A list of products in the manufacture of which this automatic equipment is recommended includes gasoline storage tanks, oil switch tanks, transformer tanks; range boilers, and pipe for dredging, and oil well casings.

The General Electric Company Schenectady, New York, will supply more information upon request.

M. & V. Tank Company Enlarges Plant Facilities

Wichita Falls, Texas, April 23.—To accomodate the company's increasing business in the oil country the M. & V. Tank Company has recently acquired another steel building as an addition to their plant here and has also purchased about six acres of land adjoining their present factory. This is to allow for the future needs of the company.

The M. & V. Tank Company operates one of the largest welded steel tank equipment manufacturing plants in the Southwest and has built up an extensive business in this line. The company manufactures the M. & V. sight flow separator.

Columbian Steel Tank Moves Branch Office

Dallas, Texas, April 21.—The Southwestern district offices of the Columbian Steel Tank Company located here have been removed from 210 Southwestern Life building to 1306 in the same building. J. S. (Sunshine Joe) Foley is in charge of the Columbian territory in the Southwest and reports business good.

The Columbian Steel Tank Company's factory at Kansas City manufactures a complete line of tank equipment for producers, refiners and marketers.

Special Representative For A. M. Byers Company

Tulsa, Okla., April 23.—Frank W. DeLuce, who has been special representative in this territory for the Murray Tool and Supply Company of Cleveland, Oklahoma, has been named Kansas and Oklahoma representative of the A. M. Byers Company of Pittsburgh, manufacturers of wrought iron pipe for the oil country.

The appointment of Mr. DeLuce to his new position was made here recently by T. L. Lewis of Pittsburgh, sales manager of the A. M. Byers Company, who is on a tour of the Mid-Continent territory.

Mr. DeLuce will spend about a month at the company's mills in the East and will then return to Tulsa and open offices here.

Hercules Supply Moves Headquarters to Dallas

Dallas, Texas, April 23.—The general offices of the Hercules Supply Company now are located in the Santa Fe building here, having been removed from Corsicana, Texas. J. T. McCarthy, Jr., is the head of the company, having established it some four years ago at Grandfield, Oklahoma.

The company maintains branch stores at Corsicana and Wortham and also at Vernon and Powell, Texas. A complete line of oil field equipment is handled by the Hercules Supply Company.

Associated with Mr. McCarthy is I. H. Atherton who formerly was with the National Supply Company at Independence, Kansas. Both Mr. McCarthy and Mr. Atherton are well known to the trade.

Production Symposium

The third Annual Symposium on the production of petroleum throughout the world has just been published by the American Institute of Mining and Metallurgical Engineers. This Symposium was brought together by the members of the Petroleum Division of the Institute and presented at the annual meeting in February, 1925, covering the production for 1924.

A careful checking of the estimates given in the Symposium for 1923 against the final figures issued by official or government agencies during the latter part of the year shows that the preliminary estimates have been essentially correct. The estimates given were within three hundredths of one per cent of the final and official figures as published by the U. S. Geological Survey in November of 1924.

Timeliness in presentation is of prime importance to the industry using these figures and the ability of the Petroleum Division of the Institute to present the studied views of leading technologists and geologists in the Annual Symposium makes this publication one of the most important of the institute's productions.

In addition to the papers dealing with the developments in 1924, the Symposium contains the suggested plan of Mr. Henry L. Doherty for the conservation of oil and gas, together with the opinions of leading petroleum men that were elicited when his paper was read at the annual meeting.

The latest attempts to produce oil in Cuba and the reason why these attempts will probably be successful in the end is mentioned. Papers discussing price and production are also included.

Copies of the Symposium may be secured through Institute headquarters, at 29 West 39th St., New York City.

(Continued from page 50)

accidents to discover the most usual causes and to devise means of prevention.

I am advised that this work is under way and will be pushed with all possible speed.

Local Societies and Good Will

Preaching doesn't do much good unless it results in stirring up interest on the part of those to whom it is directed. I have heard complaints by operators who have attempted to enforce safety measures and practices that employes will not heed advice or rules. For instance, they won't wear goggles. I assume then that if anything can be done co-operatively to stir up interest on the part of the employe in safety work it will be a potent factor for good. The proposed co-operation between the Council and the Bureau of Mines in bringing about the organization of local chapters of the Joseph A. Holmes Society to be officered and conducted by the employes themselves will be discussed by others at this meeting. The plan appeals to me as being worthy of a trial since it has proven successful elsewhere.

Good Will a By-Product

To my mind, not the least valuable result of a co-operative effort along safety lines will be the good will between employee and employer that should inevitably come about through the efforts of the Council in going to the employe in the field with motion picture entertainments, first aid instruction and other phases of the work. It evinces an interest in his welfare which should be appreciated.

Without a co-operative clearing house it would be difficult for individual companies to keep in touch with

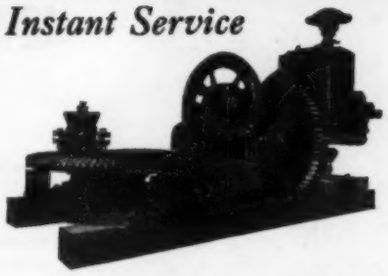
the latest developments in safety work and with the latest discoveries of new elements in the safety science. The Council can do this by assembling the facts from the experience of the various companies and transmitting them together with the new ideas developed by national organizations to all its members and by utilizing them itself in bulletins and pictures and surely the companies will co-operate in the research work and reports necessary to make this phase of the program a success. Floyd W. Parsons in his book, "Everybody's Business," says: "The nation that would lead the world in business and commerce must also lead in research." And after pointing out that co-operative research is the order of the day and that some corporations endeavor to cover up what he calls their "incompetence" by reporting to the locked door and sharp practice, he adds: "Industrial secrecy is the weapon of the business weakling, and has done more than all else to retard co-operative research," and that "They have learned that co-operation in research is absolutely essential, and that it is possible to improve life and yet make a profit on the operation."

The Council a Business Agency

So much for the brief resume of what the Council has done or may do through co-operation in a field distinct from the sphere of indivdiual action. I bespeak for it and in the transaction of its business the co-operation of the trade journals and newspapers. The trade journal reaches the oil executive and some employes—the newspaper does likewise and since the Council must constantly send its message to both employer and employe, these messengers—these agencies of education—can be of tremendous assistance. And there is one other source from which co-operation should come in a substantial way and that is the insurance company. If the Council accomplishes anything at all in its safety work the casualty insurance company will be a direct beneficiary through reduction of accidents and therefore of losses.

My vision of the Safety Council is that of a business agency—a department of the petroleum business of the Southwest which functions on the job at all times—not waiting for something to turn up or some one to call upon it for help, but accepting responsibility in advance to see that matters in its sphere are attended to. Like other branches of the Mid-Continent Oil and Gas Association, it will not wait for crises to occur but will anticipate them and try to prevent them. It is not to be an exponent of mere idealism nor yet a sinecure for those who draw the salaries. It is conceived as a valuable business agency now directed by a competent safety engineer and Board of Directors and on that basis I ask financial as well as moral support for it.

Instant Service



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They Are Correct in Design

Husky Enough to Do the Job Right

The reliable eccentric motion does away with jerky lines.
Built in three sizes:
No. 4—Belt Drive, weight 6500 lbs. For deep wells.
No. 2—12 H. P. engine, weight 4600 lbs.
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Turntable gear is easily removable and having a broad face, coarse teeth and large diameter will stand up to the heaviest loads.

SHACKLE LINES SET LOW TO THE GROUND (13 in.) ELIMINATE EXCESSIVE STRAIN. QUICKLY INSTALLED

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KANSAS CITY HAY PRESS COMPANY
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SAVE TIME AND MONEY DEALING WITH

The Largest Manufacturer of
BACK PRESSURE VALVES
BRASS OIL WELL SUPPLIES

All Sizes and Weights
For "Drill" and "Line" Pipe
Special Kinds Made to Order

Founders—Finishers—Platers

Write for Price List

Southern Brass Mfg. Co.
Houston, Texas. U. S. A.

Why Buy New When You Can Get Second Hand That Is Just As Good

10,000 ft.	5-3/16"	17 lb. used casing
3,000 ft.	5-3/16"	20 lb. used casing
6,000 ft.	6-5/8"	24 lb. used casing
6,000 ft.	8-1/4"	32 lb. used casing
6,000 ft.	10"	40 lb. used casing
2,000 ft.	12½"	50 lb. used casing
1,000 ft.	15½"	70 lb. used casing
250 ft.	20"	90 lb. used casing
20,000 ft.	3"	used line pipe
20,000 ft.	4"	used line pipe
15,000 ft.	6"	used line pipe
30,000 ft.	8"	used line pipe

We own and can make immediate shipment of this pipe from our Texas yards.

Keystone Pipe & Supply Company

Eastern Headquarters: Butler, Penna.
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Wichita Falls, Holliday, Vernon, Breckenridge, Texas

"OILWELL" ESTD 1862 C O TRADE MARK REGISTERED

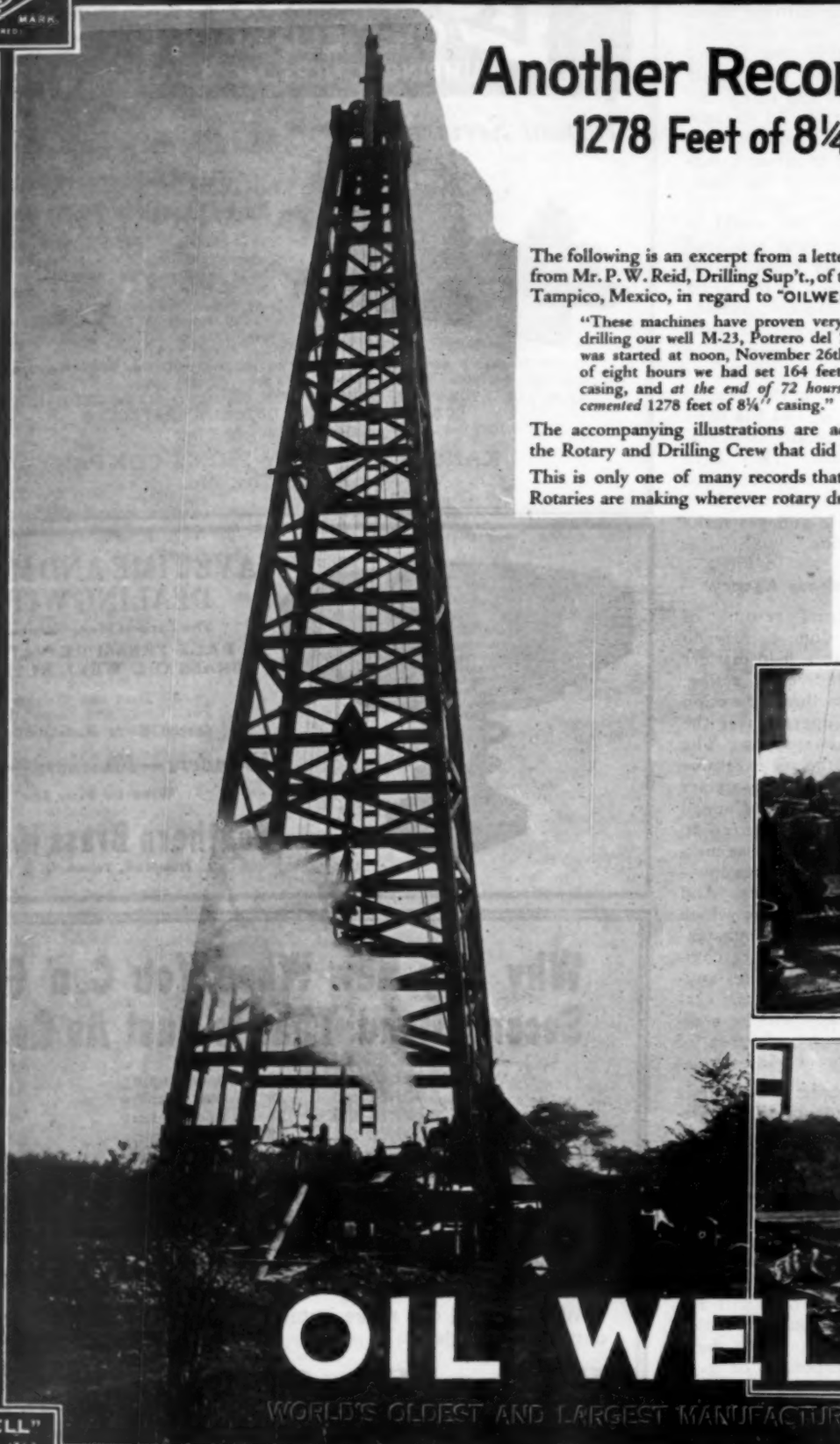
Another Record *for the*
1278 Feet of 8¼" Casing Set

The following is an excerpt from a letter dated Jan. 24, 1925, from Mr. P. W. Reid, Drilling Sup't., of the East Coast Oil Co., Tampico, Mexico, in regard to "OILWELL" Imperial Rotaries:

> "These machines have proven very satisfactory. In drilling our well M-23, Potrero del Zacate, spudding was started at noon, November 26th, and at the end of eight hours we had set 164 feet of 12½" 45 lb. casing, and *at the end of 72 hours* we had *set and cemented* 1278 feet of 8¼" casing."

The accompanying illustrations are actual photographs of the Rotary and Drilling Crew that did the work.

This is only one of many records that "OILWELL" Imperial Rotaries are making wherever rotary drilling is practised.



OIL WELL S

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD

"OILWELL" ESTD 1862 C O TRADE MARK REGISTERED

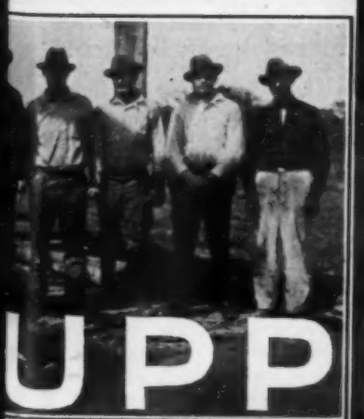
"OILWELL" ESTD 1862 C O TRADE MARK (REGISTERED)

"OILWELL" Imperial Rotary
and Cemented in 72 Hours

Another Imperial Rotary, drilling near Houston, Texas, completed a well 5281 feet deep in 57 days. Another Imperial Rotary, near Orange, Texas, drilled 5300 feet, including the setting of 4100 feet of 9" casing, all in 60 days. Still another Imperial Rotary holds the record for deep drilling in Mexico—4013 feet in 41 days, in Lake Tamiahua, drilling being done in 12 feet of water, five miles from shore.

The "OILWELL" Imperial Rotary will save time and money on your operations just as it is doing for hundreds of others.

Inquire at any of our 100 Branches.



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QUIPMENT

BRANCH STORES IN ALL OIL FIELDS

"OILWELL" ESTD 1862 C O TRADE MARK (REGISTERED)

The Gott Water Can
An Oil Field Necessity
Insures cold drinking water any day.
Known to Oil Field Workers Everywhere.
Hand Made, Durable, Galvanized.
Comes in all sizes.
Order through your Supply House.
H.P.Gott Mfg.Co.
Winfield~Kans.

AJAX
DRILLING ENGINES
Genuine Ajax Engines and parts are obtainable at all branches of the
National Supply Companies
AJAX IRON WORKS — Corry, Penna.
"Famous in every Oil Field"
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If you are contemplating building a refinery or natural gasoline plant you should be a subscriber to
The REFINER and NATURAL GASOLINE MANUFACTURER
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Box 1307 Houston, Texas

Red River Oil Sold To Oklahoma Company

Washington, D. C., April 13.—Crude oil produced in the Red river area operated by the government will be sold to the Bell Oil and Gas Company of Tulsa, Oklahoma, under a contract announced today by the department of the interior.

The oil will be sold at a price 16 cents above the posted price of the Prairie Oil and Gas Company, The Texas Pipe Line Company, the Humble Pipe Line Company and the Magnolia Petroleum Company in that district.

The Omar Gasoline Company of Wichita Falls, Texas, will purchase the natural gasoline from the field for the payment of 55 per cent of the total marketable gasoline recovered.

On May 1, the contracts will be effective.

At the present, the Red river bed has a daily production of 650 barrels of crude and a monthly production of about five-and-one-fourth gallons of gasoline per thousand cubic feet of gas.

Supreme Court Upholds Montana Oil Tax Law

Washington, D. C.. April 13.—The United States supreme court today upheld the Montana law imposing upon oil companies operating within the state an annual license tax of one per cent of the total gross value of all petroleum and other minerals or crude oil produced.

The case was heard upon the appeal of the Mid-Northern Oil Company, which contended that the statute, as applied to itself, was invalid because of the fact that the company is a lessee of the United States and therefore is "a governmental agency, means or instrumentality whose operations can not be taxed by the state."

It was held by the court that congress, in enacting the leasing act of 1920, intended "that persons and corporations contracting with the United States under the act should not, for that reason, be exempt from any form of state taxation otherwise lawful."

Los Angeles, Calif., April 11.—The Marland Oil Company secured a perfect water shut off at 4100 feet in its No. 7 Dominguez field, and is drilling close to 4300 feet. Progress will be slow from now on as much of the formation will be cored. A string of 11 inch was cemented at 4100 feet, being a world record string of this size. This is the deep test of the Dominguez field, South side, and many expect that a deeper sand will be found, and the test is being watched with more than usual interest.

Moore Heavy Drillers to the Front!

ONE of the most attractive features of the Moore derrick is its dependability under every conceivable hazard. Of course, you can calculate the theoretical strength of any derrick, but you can never be so sure as in the case of the Moore, that the derrick you pick will actually stand all the punishment its rated strength leads you to expect.

Over 30,000 Moore derricks have been sold in the last 18 years, yet the number of failures from all causes is too infinitesimal to be considered.

Since these facts are daily becoming better recognized by leading operators, the percentage of large Moore drilling derricks, used in deep and difficult territory, is increasing by leaps and bounds.

Catalog on Request

LEE C. MOORE & COMPANY, Inc., Pittsburgh, Pa.

Established 1907

Casper, Wyo.	Dallas, Texas	Tulsa, Okla.	Shreveport, La.
Midwest Building	Magnolia Building	Atlas Life Building	824 Prospect Avenue

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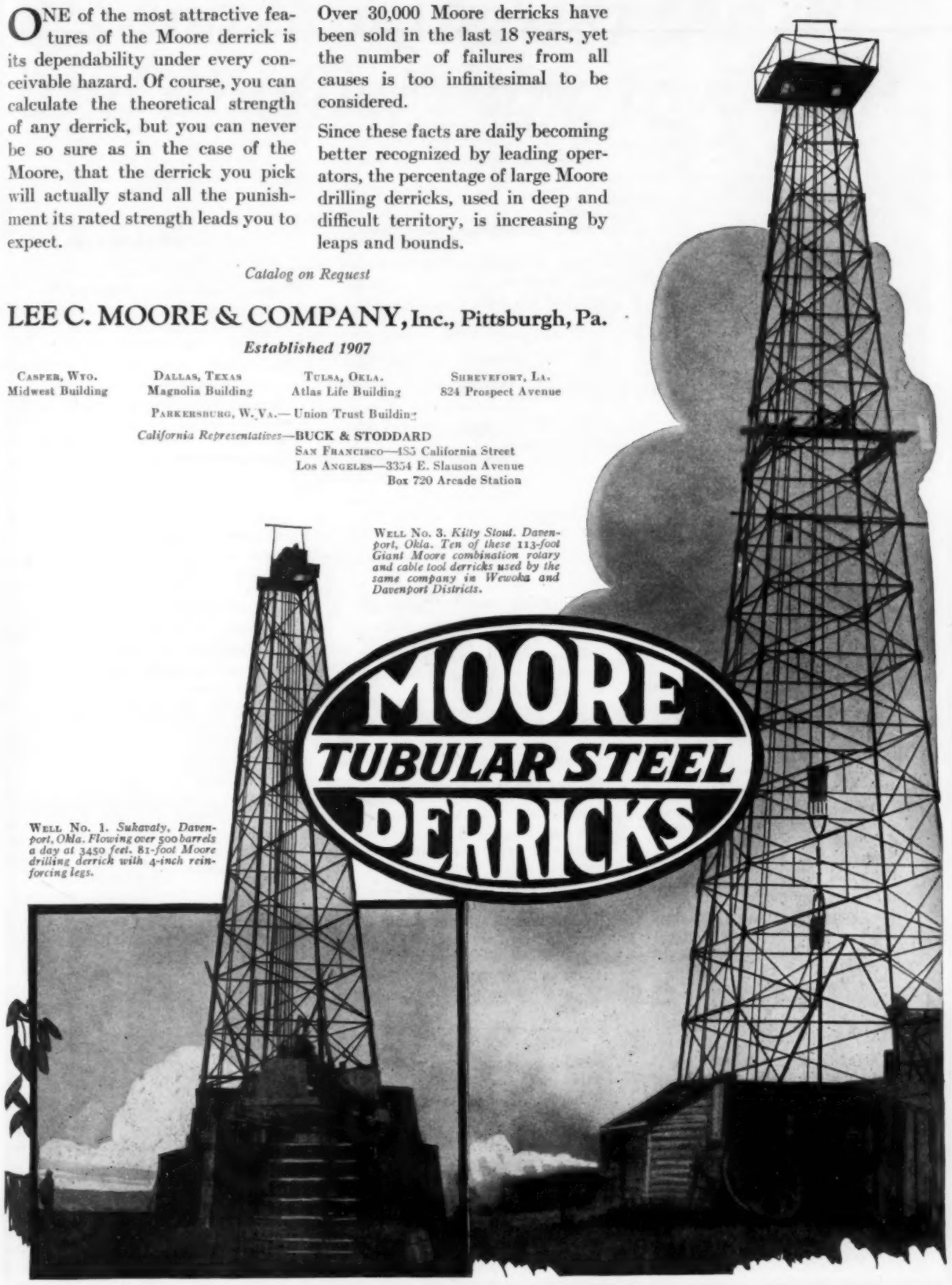

Well No. 3. *Kitty Stout. Davenport, Okla. Ten of these 113-foot Giant Moore combination rotary and cable tool derricks used by the same company in Wewoka and Davenport Districts.*

Well No. 1. *Sukavaty, Davenport, Okla. Flowing over 500 barrels a day at 3450 feet. 81-foot Moore drilling derrick with 4-inch reinforcing legs.*

SQUEAKS FROM THE BULL WHEEL

To the Sheik

Blessings on thee, little sheik,
With thy combed down hair so sleek,
With thy powder on thy face,
And thy put on airs of grace.
With thy ties and socks to match,
You think you are the season's catch;
With thy shirts of the loudest kind.
Thy suits the latest you can find,
You may think you're someone's pride and joy,
But I'm glad I wasn't born a boy.
—Margaret McCarthy in Pure Oil News.

Nancy: "Jedge, sah, I's don' cum for a devorce, fum mah man."

Judge: "On what grounds madam?"

"Fer infidelity, sah."

"Infidelity? Who is the other woman in the case?"

"Other woman, sah? Dey ain't no other woman, but ouah prechah don' tol' me mah man am a infidel."—Judge.

Frank Answer

A guest in a hotel phoned to a friend and got his Swedish maid on the line. He asked to have the friend call back later and, to make certain his instructions were understood, asked:

"Now, what are you going to do?"

"I bane gone to bed," replied the maid.

He thought he'd surely made a hit
When for his photograph she prayed,
"Out, when this calls," she wrote on it,
And gave it to the maid.

Heard at the Courthouse

Judge—"What's your name?"

Prisoner—"Rastus Smith, yeh Honah."

Judge—"Have you ever been in this court before?"

Prisoner—"No, suh. This is the first and onliest time."

Judge—"Are you sure? I think I have seen you before,"

Prisoner—"You suttinly has, Jedge; Ise your bootlegger."

Worthy of His Hire

The plumber worked and the helper stood helplessly looking on. He was learning the business. This was his first day.

"Say," he inquired, "do you charge for my time?"

"Certainly, boob," came the reply.

"But I haven't done anything."

The plumber to fill in the hour, had been looking at the finished job with a lighted candle. Handing the two inches of it that were still unburned to the helper, he said witheringly, "Here—if you gotta be so conscientious—blow that out."

He—There goes the girl of my dreams!

Second Ditto—What nightmares you do have.

"Kangaroo there some nigger, kangaroo!"

"Whatcha mean, kangaroo?"

"Get a hop on you."

I'm going to sue my English Prof for libel!

What's that?

Because he wrote on my last theme, "You have had relatives and antecedents."

Mary—"You drive awfully fast, don't you?"

Roy—"Yes, I hit 70 yesterday."

"Did you kill any of them?"

Econ. Prof.—"What was one of the evil effects of the World war?"

"Fat ladies in army pants."

Mathematical Conundrum

One and one are two,
But if one should marry,
How is it, in a year or so
There's two, and one to carry?—Judge

Thelma — "Sims said he would kiss me or die in the attempt."

Sara—"What did you do?"

Thelma—"Well, he has not life insurance, and I pitied his poor mother."

His date (crying loudly)—You don't love me any more.

He—Why you little fool; what do you think I bought you that Coco Cola for last week?

Switchcraft

The Bride (at the telephone): "Oh, John, do come home, I've mixed the plugs in some way. The radio is all covered with frost and the electric icebox is singing: '"Way Out West in Kansas."—Life.

"Niggah, I'se goin' to mash yo' nose all ovah yo' face; I'se goin' to push dose teeth down yo' throat and black both yo' eyes—et cetera."

"Black man, you don't mean et cetera, you means vice versa."

"So you think modern co-ed is passing out?"

"I know it. One passed out on me last night."

They quarreled, and at last he cried,
In accents of despair, "I wish that I could see your side."
The maiden shrieked as she replied,
"That's more than I can bare."

First Bean: "I hear that your wife is taking classic dancing. Does she show aptitude?"

tude?"

Second: "She did, but I made her stop."

Overheard at a Dance

"Otto, I smell cider on your breath."

"Nothing of the kind, sweetheart, but my collar is on so tight it squeezes my Adam's apple."

Country Man: Just think of our forest preserves.

City Man: How about our subway jams?

Two Looks

"Did you notice that insolent conductor looking at you as if you hadn't paid your fare?"

"Yes, and did you notice me looking at him as if I had?"—Le Rire (Paris.)

Mr. Newlywed: "Good gracious, dear, what a long pie! It is surely too big for just two."

Mrs. Newlywed:- "I'm sorry, Carl, but I couldn't get any shorter rhubarb anywhere."

It's one thing to GET the oil and another thing to KEEP it.

IF the millions lost annually in oil wastage could be accurately itemized, much of the loss would be found due directly to defective valves—valves that either wasted dollars through "pin-hole" leaks, or valves that failed outright in times of emergency.

In the business of RECOVERY, DISTRIBUTION and REFINING, Darling Gate Valves play an important part. Many of the larger companies have standardized on them after early experiences proved conclusively that Darlings minimized losses by staying on the job. And in emergencies, Darlings could always be depended on to "stick with it" till the trouble was over.

Naturally, these companies are the smallest contributors to the annual estimate of production losses.

Our Bulletins show details of Darling's simple construction and explain the reasons for its easy operation and extraordinary long life. We will gladly mail you copies on request.

DARLING VALVE & MFG. CO.

Williamsport, Penna.

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Petroleum Equipment Company, Los Angeles

TRADE DARLING MARK

GATE VALVES

By Invitation Member

Say you saw it in The Oil Weekly

FOR CLASSY SERVICE
TONGS
TUBING CATCHERS
ELEVATORS
FOR ALL PURPOSES
it must be DUNN

DUNN TOOLAGRAM

ORIGINAL
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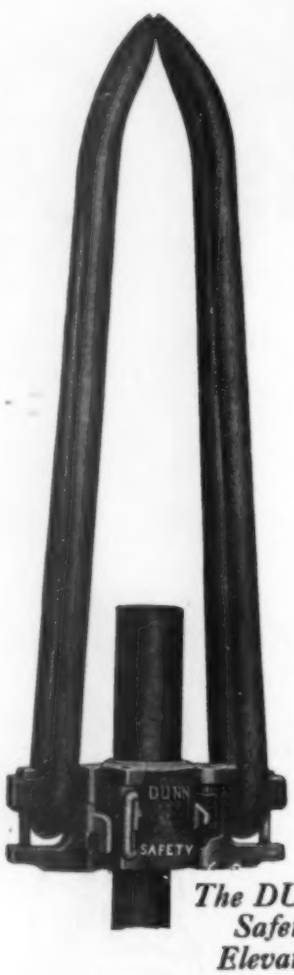
Safety



The DUNN Safety Elevator

SAFETY is the biggest word in the petroleum industry. There is no substitute, nothing else so important in drilling and pumping operations, as SAFETY TO LIFE AND PROPERTY. Speed comes next—BUT IT IS NEXT.

Safety is the first basic feature of each DUNN Tool. Next comes speed. No Dunn Tool ever makes its appearance in the field without these factors in an exceptional degree. Surpassing achievements in both therefore are natural, predetermined, mechanical results. Always remember this—

It can be DONE SAFELY with DUNN SAFETY TOOLS

If you are not thoroughly familiar with DUNN Safety Tools and their operation, write us for complete descriptive folders.

DUNN MFG. CO.
Oxnard, California

OIL WELL PATENTED DUNN TOOLS
TRADE MARK REG.

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Parkersburg Rig & Reel Co.

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Superior Tube Company

Casing Shoes—
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Regan Forge & Engineering Co.
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Hope Engineering & Supply Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Cordage—
Continental Supply Co.
The National Supply Cos.
Republic Supply Co.

Crown Blocks—
Baash-Ross Tool Co.
Continental Supply Co.
International Derrick & Equipment Co.
Lufkin Foundry & Machine Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

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National Turnbuckle Derrick Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Robertson-McDonald Lumber Co.
Superior Tube Company

Diamond, Black—
R. S. Patrick

Diamond Core Drills—
Sullivan Machinery Co.
R. S. Patrick

Diamond Drilling Carbon—
R. S. Patrick

Disc Bits
Continental Supply Co.

Ditchers—
Barber-Greene Co.
Buckeye Traction Ditcher Co.

Draw Works—
Continental Supply Co.
Lufkin Foundry & Machine Co.

Drilling Cables—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Star Drilling Machine Co.
Wickwire Spencer Steel Corp.
Williamsport Wire Rope Co.

Drill Pipe Slips—
Baash-Ross Tool Co.
Continental Supply Co.

Drilling Machines—
Bridgeport Machine Co.
Continental Supply Co.
Keystone Driller Co.
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.

Drill Collars—
Baash-Ross Tool Co.
Continental Supply Co.

Drill Pipe Cutting—
Baash-Ross Tool Co.
Houston Engineers, Inc.

Drilling Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Continental Supply Co.

Drilling Diamonds for—
R. S. Patrick

Drill Pipe—
Continental Supply Co.
Frick-Reid Supply Co.
Republic Supply Co.
Reading Iron Co.

Drilling Equipment—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Co.
Republic Supply Co.
Star Drilling Machine Co.
Western Supply Co.

Drive Pipe—
Continental Supply Co.
Republic Supply Co.
Reading Iron Co.
Superior Tube Company

Electrical Equipment—
Westinghouse Elec. & Mfg. Co.

Elevators—
Bridgeport Machine Co.
Continental Supply Co.
The Cunningham Co.
Dunn Mfg. Co.
Gulf Coast Machine & Sup. Co.
LeBus Rotary Tool Works
Wilson & Willard Mfg. Co.

Engines Diesel—
Western Machinery Co.

Engines, Gas—
Bruce-Macbeth Engine Co.
Climax Engineering Co.
Continental Supply Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Spence Machine Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines (Gasoline or kerosene)—
Climax Engineering Co.

Engines, Oil—
Continental Supply Co.
Frick-Reid Supply Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
Bessemer Gas Engine Co.
Bridgeport Machine Co.
Climax Engineering Co.
Continental Supply Co.
The Brownell Co.
De La Vergne Machine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Co.
Rock Island Plow Co.
Spence Machine Co.
Southern Engine & Pump Co.
Titusville Iron Works
Western Machinery Co.

Engineers—
David Donoghue
Foster & Reiter
Hope Engineering & Supply Co.
Lee C. Moore & Co.
Oil Conservation Engineering Co.
D. T. Ring
Westcott and Greis

Fire Protection—
Continental Supply Co.
Oil Conservation Engineering Co.

Fish Tail Bits—
Continental Supply Co.
Frick-Reid Supply Co.
Lucey Manufacturing Corp.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
W-K-M Co.

Floor Circle Brace—
Continental Supply Co.
Dunn Mfg. Co.

Fuel Oil—
Gulf Refining Co.
Sinclair Refining Co.

Gasoline Extraction Compressors—
Continental Supply Co.
Bessemer Gas Engine Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.

Gauges—
Continental Supply Co.
Oil Conservation Engineering Co.
Westcott and Greis

Gas Engines—
S. M. Jones Co.

Gas Generators—
Baird Supply Co.

Gas Traps—
American Tank Co.
Continental Supply Co.
Lorraine Corp.
Smith Separator Co.
Trumble Gas Trap Co.

Gasoline and Oil Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Graver Corp.
Continental Supply Co.
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works Co., The

Genuine Wrought Iron Casing—
Reading Iron Co.

Geologists—
Joseph L. Adler
Alexander Deussen
David Donoghue
Edwin B. Hopkins
Foster & Reiter
Heath M. Robinson

Governors—
Gardner Governor Co.

Grips and Clamps—
Continental Supply Co.
J. P. Ratigan
W-K-M Co.

Heat Exchangers—
Brown Welding & Machine Co.
Hope Engineering & Supply Co.

Hoists—
Emsco Steel Products Co.

Hose—
Continental Supply Co.
Gustin Bacon Manufacturing Co.

Houses—
Crain Ready-Cut House Co.

Iron Casing—
Superior Tube Company

Laboratory Equipment—
Continental Supply Co.
Fort Worth Laboratories

Lapwelded Steel Boiler Tubes—
The Tyler Tube & Pipe Co.

Lighting Systems—
Bridgeport Machine Co.
Continental Supply Co.
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Co.
Republic Supply Co.
Reading Iron Co.

Lumber—
Robertson-McDonald Lumber Co.

Manufacturers—
Robinson Packer Co.

Maps—
Heydrick Mapping Co.

Meters—
Continental Supply Co.
Westcott and Greis

Motors—
Twin City Co.
Westinghouse Elec. & Mfg. Co.

Oil Field Equipment—
H. Rickman

Oil Field Supplies—
American Tank Co.
Bridgeport Machine Co.
Butler Mfg. Co.
Continental Supply Co.
The Cunningham Co.
C. C. Fetty
Frick-Reid Supply Co.
Graver Corp.
Erle P. Halliburton
International Supply Co.
Kansas City Struct. Steel Co.
Lee C. Moore & Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Petroleum Iron Works Co., The
Republic Supply Co.
Regan Forge & Engineering Co.
Robinson Packer Co.
Smith Separator Co.
Southern Brass Mfg. & Plating Co.
Superior Tube Company
United Iron Works, Inc.
W-K-M Co.
J. H. Williams & Co.

Oil Well Casing—
Continental Supply Co.
Frick-Reid Supply Co.
Republic Supply Co.
Superior Tube Company

Oil Well Cementing—
Erle P. Halliburton

Oil Well Shooting—
U. S. Torpedo Co.
Zero Hour Torpedo Co.

Overshots—
Baash-Ross Tool Co.
Continental Supply Co.
LeBus Rotary Tool Works

Packers—
Continental Supply Co.
The Guiberson Corp.
Layne & Bowler
Robinson Packer Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
W-K-M Co.

Packing—
Continental Supply Co.
D. F. Connolly Agency
Gustin Bacon Manufacturing Co.
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.

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Continental Supply Co.
Peden Iron & Steel Co.

Panel Boards—
Westinghouse Elec. & Mfg. Co.

Patents—
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Jack A. Schley
Jesse R. Stone

Pipe Grips—
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W-K-M Co.

Pipe—
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Continental Supply Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Co.
Superior Tube Company
Williamsport Wire Rope Co.

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Johns-Manville, Inc.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Threading Machines—
Standard Engineering Co.

Pipe Vises—
J. H. Williams & Co.

Pipe Wrenches—
Continental Supply Co.
Dunn Mfg Co.
The Guiberson Corp.
Trimont Mfg. Co.
LeBus Rotary Tool Works
Republic Supply Co.
J. H. Williams & Co.
Wickwire Spencer Steel Corp.

Portable Buildings—
Butler Manufacturing Co.
International Derrick & Equipment Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Co.
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pulleys—
Continental Supply Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Pulling Machines—
Clark Machine Co.
Continental Supply Co.
Iron King Mfg. Co.
Safety Pulling Machine Co.

Pumps—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Co.
D. & B. Pump & Sup. Co.
C. C. Fetty
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg Co.
Goulds Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.

Portable Compressors—
Continental-Supply Co.
Sullivan Machinery Co.

Pumping Equipment—
Shaffer Specialty Co.

Pumping Powers—
Continental Supply Co.
C. C. Fetty
Frick-Reid Supply Co.
International Supply Co.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Co.
Spence Machine Co.

Regulators—
Westcott and Greis

Refined Products—
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Sinclair Refining Co.
Texas Co.

Recorders—
Fort Worth Laboratories

Refinery Equipment—
American Tank Co.
Butler Mfg. Co.
Continental Supply Co.
Graver Corp.
Oil Conservation Engineering Co.
Petroleum Iron Works Co., The
Republic Supply Co.
Smith Separator Co.
Titusville Iron Works
United Iron Works, Inc.
Westcott and Greis
Wyatt Metal & Boiler Works

Rig Irons—
Continental Supply Co.
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Co.

Rod and Tubing Protectors—
H. Rickman

Rotaries—
International Supply Co.

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GUIDE FOR PURCHASERS

GUIDE FOR PURCHASERS—Continued

Rotary Rock Bits—
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Hughes Tool Co.
Reed Roller Bit Co.

Rotary Fish Tail Bits—
Continental Supply Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Safety Casing Clamps—
Shaffer Specialty Co.

Sand Reel Supports—
Shaffer Specialty Co.

Separators—
American Tank Co.
Butler Mfg. Co.
Continental Supply Co.
Lorraine Corp.
Smith Separator Co.
Trumble Gas Trap Co.

Specialty Manufacturers—
Shaffer Specialty Co.

Structural Steel—
Butler Mfg. Co.
United Iron Works, Inc.

Steel Derricks—
Continental Supply Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Company

Steel Crown Blocks—
Continental Supply Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Co.
Graver Corp.
Petroleum Iron Works Co., The

Still Covering—
Johns-Manville, Inc.

Stuffing Boxes—
A. W. Fawcett

Strainers—
Continental Supply Co.
Emsco Steel Products Co.
Layne & Bowler Co.
J. H. McEvoy & Co.
Pelican Well Tool & Supply Co.
W-K-M Co.

Special Steels—
Central Steel Co.

Sucker Rod Lines—
Continental Supply Co.

Sucker Rod Elevators—
The Cunningham Co.

Sucker Rod Hangers—
Lorraine Corp.

Sucker Rod Guides—
H. Hickman
A. H. Brandon

Sucker Rod Hooks—
The Cunningham Co.

Sucker Rod Sockets—
Baird Supply Co.
Bradford Motor Works
Brown Welding & Machine Co.
Continental Supply Co.
The Cunningham Co.
Shaffer Specialty Co.
Western Supply Co.

Sucker Rods—
Axelson Machine Co.
Continental Supply Co.
Columbus Sucker Rod Co.
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Co.

Swabs—
Continental Supply Co.
The Cunningham Co.
Shaffer Specialty Co.

Tank Bolts—
Continental Supply Co.

Tanks—
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
Continental Supply Co.
The Brownell Co.
Ganta Tank Co.
Graver Corp.
Kansas City Struct. Steel Co.
Maloney Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works Co., The
United Iron Works
Wyatt Metal & Boiler Works

Tank Deadwood—
Robertson-McDonald Lumber Co.

Tank Equipment—
Continental Supply Co.
Johns-Manville, Inc.
Oil Conservation Engineering Co.
Parkersburg Rig & Reel Co.
Westcott and Greis

Tank Insulation—
Johns Manville, Inc.

Tank Roofs—
Johns-Manville, Inc.

Temper Screws—
Burns Tool Co.

Thermometers—
Continental Supply Co.
Fort Worth Laboratories

Timbers—
Robertson-McDonald Lumber Co.

Tongs—
Birdgeport Machine Co.
Continental Supply Co.
Dunn Mfg. Co.
Guiberson Corp.
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
J. H. Williams & Co.
Wilson & Willard Mfg. Co.
W-K-M Co.

Tool Joints—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Co.
Emsco Steel Products Co.
Hughes Tool Co.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Tools (Fishing and Drilling)—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Brown Welding & Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
Houston Engineers, Inc.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Company
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Star Drilling Machine Co.
Sullivan Machinery Co.
W-K-M Co.
Western Supply Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
Rock Island Plow Co.
Twin City Co.

Traveling Blocks—
Baash-Ross Tool Co.
Continental Supply Co.
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Tubing Catcher—
Continental Supply Co.
Dunn Mfg. Co.
Guiberson Corp.

Tubing Lines—
Continental Supply Co.

Tubing—
Continental Supply Co.
Republic Supply Co.
Reading Iron Co.

Underreamers—
Bridgeport Machine Co.
Continental Supply Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Continental Supply Co.
Sullivan Machinery Co.

Valves—
Bradford Motor Works
Continental Supply Co.
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Ludlow Valve Mfg. Co.
Norris Bros.
Oil Conservation Engineering Co.
The Wm. Powell Co.
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Valves and Fittings—
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Walking Beams—
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International Derrick & Equipment Co.
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Continental Supply Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Co.
D. & B. Pump & Sup. Co.
Republic Supply Co.
The Charles N. Hough Mfg Co.
Southern Brass Mfg. & Plating Co.
Texas Oil Pump Co.

Water Gauges—
Continental Supply Co.

Continental Supply Co.
H. P. Gott Mfg. Co.

Wire Rope—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Co.
International Supply Co.
Regan Forge & Engineering Co.
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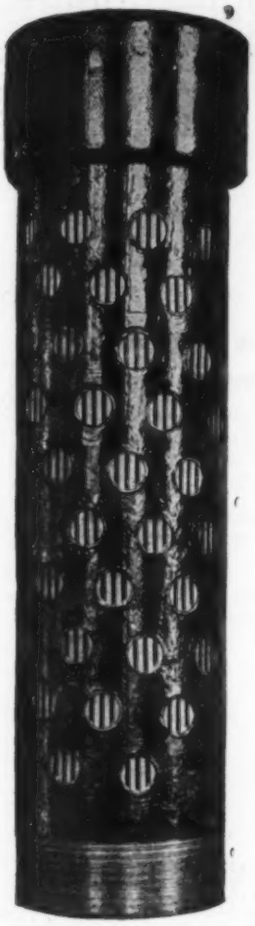

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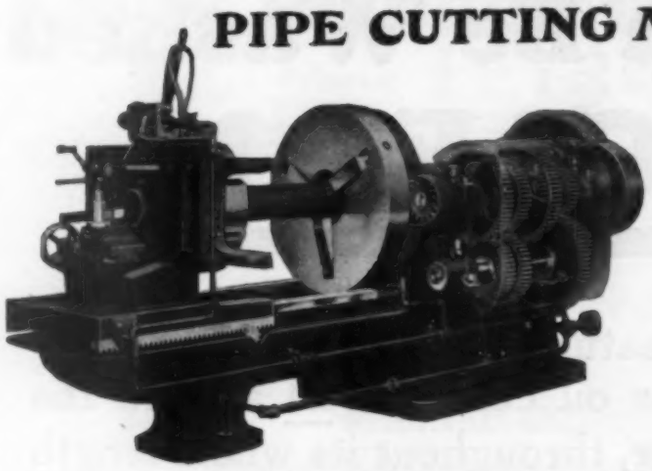

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